

for building products, heat exchange, fluid power, general engineering, zip fasteners, refined and wrought metals.

PUBLISHED IN LONDON AND FRANKFURT

No. 27,827

Thursday March 29 1979

\*\*\*15p

LET THE GIN BE HIGH & DRY!



Really Dry Gin

CONTINENTAL SELLING PRICES: AUSTRIA Sch 15; BELGIUM Fr 25; DENMARK Kr 3.5; FRANCE Fr 3.5; GERMANY DM 2.0; ITALY L 600; NETHERLANDS Fl 2.0; NORWAY Kr 3.5; PORTUGAL Esc 25; SPAIN Ptas 50; SWEDEN Kr 3.25; SWITZERLAND Fr 2.0; EIRE 15p

NEWS SUMMARY

GENERAL

Nuclear leak in U.S. plant

An emergency was declared yesterday at a U.S. nuclear power plant after a radiation leak inside one of its reactors. The Nuclear Regulatory Commission sent inspectors to the plant in central Pennsylvania, and all non-essential employees were evacuated. The leak, which reinforced U.S. unease about nuclear safety, has been blamed on a cooling system failure which caused radiation inside the reactor containment shell. One seal report claimed radioactive steam had escaped into the atmosphere. Back Page

Troops close in on Kampala

The United Nations was preparing yesterday to evacuate dependents of its personnel in Kampala as Tanzanian-backed forces invading Uganda closed in on the capital. Nairobi diplomats reported that the invading troops had advanced five miles from Mpigi, south-west of Kampala, and were occupying the village of Yabingo, about 13 miles from the capital. Back Page

Summit demand

Raq and Syria yesterday called for a full summit to decide on more extensive economic measures against President Anwar Sadat of Egypt. After he signing of the peace treaty with Israel. Page 18

Lorry inquiry

The Government has decided to head with its inquiry into weight limits for lorries. The probe will also consider the impact of lorries on people and their environment. Transport Secretary William Rodgers told the Commons yesterday. Back Page. Aid for new rail rolling stock. Page 6

Bomb threat

Part of the U.S. Embassy in Moscow was evacuated after a man walked in and threatened to explode a bomb if he was not given a visa to leave the Soviet Union.

Lock-out protest

Riot police used smoke bombs to disperse demonstrators protesting at the closure of Ford Motor's plant near Valencia, Spain. Ford-Espana, the company's subsidiary, declared a lock-out after a series of strikes. Page 3

Recruits plan

The Government is to press ahead with plans to recruit two or three experienced industrialists for under-secretary posts, in spite of opposition from Civil Service unions.

Record perm

Hairdresser Irene Powell of Port Talbot, West Glamorgan, filled in a Littlewoods pool coupon for the first time and won a record £882,528 on her 20th birthday.

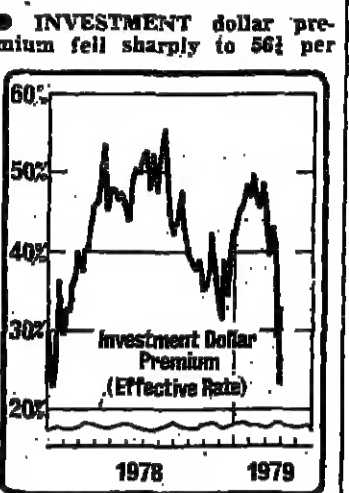
Briefly

Two Britons and a Pakistani were missing feared dead after being trapped by crude oil flooding the pump chamber of the British tanker Texaco Spain in Rotterdam. Police announced a curfew in a large area around Rhodesia's international airport after black nationalist guerrillas fired anti-tank shells into a white Salisbury suburb. There were no injuries. Snow made driving treacherous in many parts of the UK yesterday and more wintry weather is forecast today. Weather Back Page

BUSINESS

Gilts up by 1.15; Equities down 0.9

● GILTS traded strongly as stock markets experienced their busiest trade for two years, but eleven-hour nervousness over the no-confidence vote slowed the pace and longs closed up. Shorts also settled with marginal improvements and the Government Securities Index closed 0.15 up at 74.39. ● EQUITIES reacted to the movement in Gilts and profit-taking started to develop among the leaders, although many secondary stocks remained near the best of the day. The FT Ordinary Industrial Index closed 0.9 lower at 538.3, representing a turnaround of 6.1 from the noon calculation. ● INVESTMENT dollar premium fell sharply to 561 per cent against 614 per cent. Page 30.



● STERLING reacted nervously falling 40 points to close at \$2.0495. Its Bank of England index fell to 65.5 (65.5).

● GOLD rose by \$1 to close at \$244.

● WALL STREET was up 1.82 at 873.18 at mid-session.

● RAPIDLY deepening world recession could occur over the next decade unless major structural changes are made in the pattern of trade, according to a group of Cambridge economists. Page 8 and Back

● INLAND REVENUE is appealing against a tax commissioners' ruling that Marine Midland Bank should not have to pay Corporation Tax on sterling gains from non-sterling assets financed through foreign currency loan stock. Page 6

● LLOYD'S OF LONDON officials are considering mounting a rescue for the stricken underwriting syndicate, formerly managed by Mr. Frederick Sasse. Page 6

● THEME of recommendations in the Green Paper on restrictive trade practices policy is to strengthen and make more selective existing competition law, while adding a greater degree of flexibility. Page 7 and Back

● RIO TINTO ZINC, the biggest of the London mining houses, is considering participation in Mr. Robert L. Sprinkel's scheme to rescue the failed Wheel Jane tin mine near Truro in Cornwall. Page 8

LABOUR

● NUPE has called off its lone campaign of industrial action over a 9 pence pay deal for hospital ancillary workers. Page 8

COMPANIES

● PRUDENTIAL, the UK's largest life assurance group, reports a 29 per cent rise in profits in 1978 to £41m. Dividend payments are lifted by 20 per cent. Page 24 and Lex

● SHERIDANS BANKERS reports net profit for 1978 up £1.44m to £4.94m, following recovery in associates' results. Page 24 and Lex

Labour needs working majority, says Premier

Callaghan admits election is essential

BY RICHARD EVANS, LOBBY EDITOR

MR. JAMES CALLAGHAN admitted for the first time yesterday during the Commons debate on the Government that a general election must take place soon. He declared during a spirited defence of the Government's policies that if there was to be economic success, Labour needed a working majority, "and we shall seek that in the early future."

Pugnacious

A Government defeat would mean an immediate election at the end of April or early May, but even survival would not greatly lengthen the Government's life. Most Ministers see little point in trying to survive from day to day. This belief came through time after time in Mr. Callaghan's pugnacious speech in which he highlighted the Government's achievements and warned of the dangers of a Conservative administration under Mrs. Thatcher. The Conservative leader, making one of the most critical speeches of her career, called for an immediate general election as the only way to renew the authority of parliamentary government. "This Government has failed the nation, lost credi-

bility and it is time for it to go," she declared.

The opening speeches in the debate took place against a background of frantic last-minute attempts to persuade key minority party MPs to change sides. There were numerous rumours about the attitude in particular of many Northern Ireland MPs.

The key element remains the attitude of the seven Ulster Unionist MPs and Mr. James Moynihan, their parliamentary leader, appeared to leave the door slightly ajar for an 11-hour deal. He made an enigmatic speech underlining the importance of local government reform in the province.

The last time a government was defeated on a motion of no confidence in the Commons was in 1924 when Mr. Ramsay MacDonald's minority Labour administration lost office.

Mr. Callaghan made no attempt to offer any political carrots to the minority parties, but he did repeat his offer of all-party talks on devolution should the Government survive the division.

Mrs. Thatcher's speech was surprisingly low key, largely because of a deliberate tactic by Labour MPs to maintain a complete silence as possible. There was no attempt to heckle

or to intervene and in these circumstances the Tory leader's speech appeared to lack impact. She launched a detailed critique of the Government's failure to achieve its economic objectives on prices, employment and manufacturing output, and she castigated it for the "total collapse" of its social contract strategy.

In her view, rarely could Britain's standing in the world have been lower since the war or its defences weaker. "Britain is now a nation on the sidelines," Mrs. Thatcher declared.

Over the past five years of Labour rule far too little attention had been paid to wealth creation, and far too much to wealth distribution. The Tories would give top priority to a policy of incentives and taxation cuts.

Despite the Government's pronouncements on incentives there had been no action. "The lack of that policy has led to a haemorrhage of talent and in management, and resentment among the skilled," she said.

Unions set election machine in motion, Back Page

Pensions to rise 12 1/2%

BY ERIC SHORT

BASIC STATE retirement pensions are to rise by about 12 1/2 per cent at the next uprating in November to about 22 per week for a single person and about 235 per week for a married couple.

The rises, announced by the Prime Minister yesterday, pre-empting the Chancellor's Budget statement, would provide for a rise of about 22.50 a week for a single person and 24 a week for a married couple. The present weekly rates are £19.50 and £21.20 respectively. The new rates represent increases of 12.8 per cent and 12.2 per cent.

While any incoming Conservative Government would not be obliged to implement these pre-empted increases in November, it would be bound by law to revise pension rates by that date to take account of inflation.

Parliament Page 10

China to raise \$500m loan through Arab consortium

BY OUR FOREIGN STAFF

CHINA is raising what appears to be its first syndicated loan in the international banking market.

The loan, for \$500m (£244m), is being arranged through the Paris-based consortium, Union de Banques Arabes et Francaises, with the co-operation of other Arab banks. It is not tied to particular development projects or imports from specific countries.

The terms are being kept closely guarded, but were believed by banking sources yesterday to be 0.5 points above the London InterBank Rate (LIBOR) over seven years.

Bankers were not surprised by the agreement, which appears to coincide with other measures that the Chinese are now taking to raise money on the commercial markets. There was surprise, however, that the first mandate should have been awarded to a largely Arab consortium. The loan is being

placed among mainly Arab institutions.

It also merged yesterday that a British bank has been approached to arrange a syndication for a loan believed to be about \$500m over five years.

Finalising

From Tokyo, it was reported as well that a group of 22 Japanese banks, which have been negotiating with China on credit terms, may agree to a 4 1/2 year loan for \$20m also at 0.5 points above LIBOR. The Japanese had been seeking a margin of 3/4 of a point as against Chinese attempts to reduce it to 1/4 of a point.

Japanese banks are also negotiating a six month refinancing facility with China for \$60m. Agreement looks possible on a rate of 0.25 points above LIBOR. The succession of deals suggests that the Chinese are now finalising both the amounts they

want to borrow and the terms which they are prepared to pay. Up to now most of China's financing arrangements for its industrialisation programme have been made through government backed agencies such as Britain's Export Credits Guarantee Department.

The attraction to them of a loan raised through a group of Arab banks would seem to be that it involves no commitment to any of their major trading partners.

Chinese leaders have recently expressed caution over imports and credits, saying they did not want to borrow more than they could afford. This has been reflected in China's freezing contracts with Japan for \$20m to \$30m as a result of differences over the financial arrangements.

While the Chinese are in the process of revising their investment priorities - downgrading steel and heavy industry in favour of agriculture and light

industry - there are still strong signs that they intend to continue to make extensive purchases of foreign technology.

China's trade in 1978 was thought to be roughly in balance at \$8bn each way. Foreign exchange reserves remained at about \$20bn and China contracted to purchase about \$70m-worth of equipment.

£ in New York

	March 27	Previous
Spot	\$2.0495-0505	\$2.0585-0555
1 month	0.42-0.38 dis	0.43-0.38 dis
3 months	0.74-0.59 dis	0.75-0.74 dis
12 months	2.35-2.30 dis	2.40-2.30 dis

Algerian oil price to rise by 25%

BY RICHARD JOHNS

ALGERIA has decided on a price of about \$18.50 per barrel for its light, non-sulphurous crude. Mr. Ait Laoussine, vice-president of the State oil corporation Sonatrach, said yesterday.

Such an increment would be 25 per cent above the price set for the first quarter. Speaking on his departure from Geneva at the end of the Organisation of Petroleum Exporting Countries' meeting, Mr. Laoussine said that the market could support such a price.

It would involve a rise in the quality premium charged for Saharan and Zabaitine varieties to \$1.50. This would be in addition to the extra \$1.10 on the basic price and the \$1.20 surcharge agreed by all members of OPEC except Saudi Arabia and possibly the United Arab Emirates.

North Sea oil contract prices will rise in line with those set by the North African producers. Prices for the main crudes, such as Forties and Ekofisk, are likely to be increased to about \$17.50-\$18 a barrel, a rise of 16 per cent on the first quarter level of \$15.50.

Consultations

Prices gained for occasional cargoes sold on the spot market which accounts for only a very small percentage of world oil trade, are likely to continue at a rather higher level. One cargo from a northern North Sea field was sold recently at \$22 a barrel for delivery late in the second quarter.

Thus, in spite of Saudi Arabia's success in limiting the rise of the price for the Arabian Light "marker" to the level originally scheduled for the last quarter, Algeria feels able to set one close to its original \$19 target.

Mr. Izzeddin Mabrouk, Libyan Minister of Oil, said that his country's prices would not be announced until Sunday but they would be in line with those of Algeria. In practice, that would mean anything from \$17.75 to \$18.40.

Nigeria, which held consultations with Libya and Algeria in London before the OPEC conference, will co-ordinate its prices with them. It is believed to have agreed to reduce its production, which rose sharply as a result of the cut-off in Iranian exports in the winter, to help support the big premiums in prospect for the North African crudes.

As yet the United Arab Emirates appears to be undecided on its pricing policy.

Dr. Mana Al Otaiba, Minister of Oil, said on Tuesday that his Government would preserve its existing differentials but left the OPEC conference without making it clear whether they would be based on the new official price of the "marker" crude or on the \$12.20 surcharge as well. Oil industry executives believe the UAE will do the latter.

In the meantime, there can be no assurance that Saudi Arabia will keep its rates adjusted to official \$14.52 base reference agreed upon by OPEC for the whole of the second quarter. On Tuesday night Sheikh Ahmed Zaki Yamani, Saudi Minister of Oil, appeared to leave the door open for moving into line with the kingdom's intention to impose a surcharge on top of the official rate he said: "We are not going to apply this. It is not our intention right now."

Sheikh Yamani suggested that the tight market would be eased by the fact that Venezuela, Iraq and Nigeria would continue to produce at the levels reached as a result of the shortfall in Iranian supplies.

However, Venezuela has stated that it wishes to go back to the old level. Nigeria, at the very least, will be under heavy pressure from fellow North African producers to cut back. The Iranian delegation claimed it had been assured by Nigeria that it would do so.

Mr. Taveh Abdel-Karim, Iraqi Minister of Oil, said his country had raised output from 2.5m b/d to 3m b/d and would drop to the old level.

In contrast, Sheikh Yamani said that Iraq's production had risen as high as 3.5m b/d, of which no less than 1m b/d was being sold on the spot market - a practice that he expected to continue.

On the basis of optimistic forecasts about exports by these three producers and Iran he envisaged supply and demand coming into balance by the end of the year, eliminating the surcharge in the process - but only so long as consumption was reduced by 2m b/d and there was no more stock-piling by the industrialised country. Informed that the U.S. had stopped adding to its reserves he said: "That's good news."

In line with the OPEC communiqué's strictures about oil company profits arising from the Iranian crisis and its warning to those charging developing countries more than the "OPEC price," he threatened reprisals.

CHIEF PRICE CHANGES YESTERDAY

(Prices in pence unless otherwise indicated)

RISERS	
Excheq. 12pc '90...	£44 + 1
Apex Properties	114 + 7
Allen Harvey Ross	385 + 25
BPM A	92 + 8
Beecham	733 + 8
Burton A	296 + 8
Cavendish	193 + 13
Car's Milling	123 + 13
County Dist. Props.	194 + 13
Feb Intl.	38 + 4
Farnell Elect.	528 + 23
Hambro Life	490 + 17
Hanger Invs.	64 + 81
Intl. Thomson Cnv.	360 + 15
Jones (Ernest)	244 + 14
Kalamazoo	62 + 7
Kent (M. P.)	65 + 4
Morland	121 + 14
Prudential	187 + 8
Samuel Props.	129 + 8
Savoy A	98 + 5
Scottish TV A	80 + 5
Sharna Ware	145 + 18
Union Discount	380 + 15
Wilkinson Mitchell	44 + 6
Wilmot-Breeden	119 + 54
Yorkshire Chemicals	84 + 8
BP	1144 + 26
Atherton Anthony	19 + 4

FALLS

Assed. Fisheries	38 - 3
Bluebird Conf.	79 - 4
GKN	276 - 10
Peterson Zochonis A	192 - 13
Sanderson Murray	40 - 13
Utd. Scientific	262 - 32
De Beers Ltd.	385 - 10
General Mining	417 - 23
Union Corp.	327 - 13
Western Deep	742 - 36

CONTENTS

Pulp and paper: financial trouble mounts in Sweden and Finland	22
Economic Viewpoint: the dubious case for import controls for all	23
Industrial valves: the British industry in difficulties	32
Spanish motor industry: Ford plant locks out its workers	3
Lombard: Nicholas Colchester on the strength of the pound	20
Marketing (and warfare): a lesson from von Clausewitz	12
Editorial comment: Restrictive practices; Portugal	22
Survey: micro-electronics	33-38

Agriculture	39	European Options	31	Saleroom	5
American News	4	FT Accounts	40	Share Information	42-43
Appointments	4	Ins. Companies	27-29	Stock Markets:	40
Arts	14-18	Jobs Column	14	London	31
Base Rates	21	Leader Page	22	Wall Street	31
Business	31	Letters	22	Bourses	31
Business Opps.	31	Lex	44	Technical	31
Business Notes	19	Lombard	20	Today's Events	23
Commodities	38	Marketing	12	TV and Radio	20
Companies - UK	24-26	Men & Matters	22	UK News	47
Crossword	20	Money & Exchange	30	General	6-8
Econ. Indicators	10	Overseas News	4	Labour	38
European Guide	22	Parliament	10	Unit Trusts	47
European News	2-3	Racing	20	Weather	44
				World Trade News	5

For latest Share Index phone 01-246 8086

British built by TEREX GM the best on earth



and service by BLACKWOOD HODGE the best on earth



# Business confidence stays high in West Germany

BY ADRIAN DICKS IN BONN

BUSINESS confidence in West Germany remained at a high level in February, with more manufacturing companies taking an optimistic view of the next six months than in January, the IFO Institute reports today.

But the institute expresses concern that further oil price increases could trigger off an inflationary spiral in West Germany, and help push the rate of price increases well above the 3.5 per cent expected this year.

The institute's comments coincide with today's meeting of the Central Bank Council in Frankfurt, widely expected by the banking community to take the opportunity to raise discount rate from 3 to 3.5 per cent.

In addition to technical reasons prompting this step, Dr. Otmar Emminger, Bundesbank President, delivered a warning of his own about inflation earlier this week.

Leaving aside the impact of further oil price rises, the IFO survey suggests that while the former economic trend has led to a greater number of price increases than in early 1978, many industries appear to have made their adjustments for the year.

The most notable sector for increasing prices in February was semi-manufacturers such as chemicals, iron and steel, non-ferrous metals and foundry products — all of which have only

in the past two or three months begun to report the benefits of economic recovery.

The survey shows a less satisfactory trend for producers of consumer durables such as household electrical appliances. But companies reported that they do not expect lasting ill-effects from the current check to demand from slower exports and from a high level of domestic stocks.

Manufacturers of capital goods, often seen as the key component of the IFO test, reported increased order books and output rates. This led many respondents to describe business conditions in February as closer to "normal" — a term that appears to refer to the years before the 1973-74 oil price increases.

Mechanical engineering and machinery producers, in particular, reported a further improvement in business, with a marked recovery in export orders.

Electrical engineering companies were less satisfied, while the data processing and office equipment industry continued to experience more difficulties.

The motor industry remained the strongest point in the German economic picture, with private car and commercial vehicle manufacture still apparently booming.

## Swedish N-plants approved

By John Walker in Stockholm

THE BOARD of the Swedish Nuclear Power Authority has voted to go ahead with the fuelling of two more nuclear power stations. The decision has come as a great relief to the Liberal minority Government which has promised to follow the Board's decision.

Disagreement among the political parties over the nuclear power issue broke up the three-party Non-Socialist Government last year.

The two nuclear power stations involved are Ringhals 3 and Forsmark 1. They will bring to eight the total of stations already on stream, or nearing completion. The Authority has plans for 13 stations.

Voting by the Board was six for and two against.

The conflict over the nuclear energy programme remains at the centre of the political stage and is likely to become more controversial as the time approaches for the general election to be held in September.

There is also the important issue of safe storage of nuclear waste, and whether it can be stored in caves.

## Paul Lendvai reports on Czechoslovakia's deceptive political calm

### Economic fears break through

"WE CZECHS are normal people. We do not like fighting losing battles but prefer to adapt ourselves to the given situation." That is how an engineer in his late forties summed up the popular mood in Czechoslovakia.

A glance at Rude Pravo, the central party paper, tends to confirm the impression of a certain political normalisation. Instead of attacking dissident intellectuals and thundering against western "imperialist plots," Mr. Milos Jakes, Secretary of the Central Committee, fills four pages with a report to the plenum on the performance of agriculture and the food industry.

Both the personality of the speaker and the subject matter are pointers to just how much has changed in Czechoslovakia in the decade since 1969 when Dr. Gustav Husak, now both head of state and party leader, replaced Mr. Alexander Dubcek, the hero of the short-lived reforms of the "Prague Spring."

The same Mr. Jakes who in 1970-71 was in charge of purging almost half a million party members now has to deal with problems such as the unsatisfactory production of sugar-beet, fodder and potatoes.

Mr. Jakes presented a rather sombre picture: plan targets during the last three years were not met in the production of feed grains, sugar beet, hops,



Prime Minister Lubomir Strougal (left) and President Gustav Husak: pragmatic attitudes.



fruit and vegetables, as well as cattle breeding. The food industry remained 2.6 per cent below target, and co-operative and state farms failed to become sufficiently profitable.

With food imports a heavy drain on meagre foreign exchange resources, the leadership publicly committed itself at the last party congress, in April 1976, to make the country self-sufficient in agriculture by 1980. But Mr. Jakes demolished any idea that agriculture might be thriving.

His candour, coupled with a call for greater efficiency, higher quality and meaningful material incentives indicates the seriousness with which the top leaders view the economic situation.

The energy and power sector, which is due to receive a third of total industrial investments during the current five-year plan, is also causing serious concern. The country, and above all industry, is beginning to recover from the repercussions of the winter power shortage.

It was caused primarily by difficulties in transporting coal from the North Bohemian coal mining areas to the eastern part. Severe restrictions on the consumption of electricity were imposed, including the reduction of television transmissions to two and a half hours in the evening, a three-week closure of schools, and changes to working shifts.

Winter hazards dramatically illustrated the country's dependence on poor quality lignite, which is the base for 70 per cent of the output generated by thermal power stations. In all, coal-burning power plants account for 95 per cent of the electricity.

A sudden change in temperature, frost and snow produced frozen rails, bringing transport to a standstill. Worse still, railmen had no equipment to cope with the emergency and in the process of trying to get the frozen coal from the freight wagons they caused further serious damage. With no hope of increased Soviet oil deliveries (17m tons in 1977) and with nuclear power covering only at best 4 per cent of energy demand by 1980, the country has to rely on coal mined under increasingly difficult conditions and at an ever-growing cost.

We have no resources apart from timber and the hands of our people. That is how the Prime Minister, Mr. Lubomir Strougal summed up the situa-

tion in a recent talk. Predictably he omitted to mention the delicate issue of uranium reserves shipped for processing to the Soviet Union.

The revolution in Iran poses a new threat to energy supplies. The Shah, who together with Empress Farah received honorary degrees from Prague's Charles University in August, 1977, as well as the highest Czechoslovak order (the White Lion First Class with chain) approved a contract under which Czechoslovakia was to receive

### Five-year plan draft rejected

Prime Minister Lubomir Strougal yesterday told the Czechoslovak Parliament that the Government has rejected draft proposals for the next five-year plan, AP reports from Prague. Ministers and industries will have to submit new proposals.

The proposals put too much emphasis on imports and had demanded inefficient investments, said Mr. Strougal. Forecasting a change in the method of planning, he disclosed that an improved system will be introduced this year to include the organisation of foreign trade activities, in addition to the tasks of the management.

Although exports increased by an unprecedented 35 per cent in the last three years, he said, growing raw material and fuel prices had eaten away the profits.

3.5bn cubic metres of natural gas a year between 1981 and 2001. It was even hoped that by the 1980s Iran could cover almost a third of the demand for imported fuel.

Travelling through Bohemia, the visitor is struck by the ever present problem of air pollution and environmental damage caused not only by open cast mining but also by the antiquated plants with industrial equipment, on average 12 years old.

The fact that Czechoslovakia before the war was already a highly industrialised country and that little damage was done to its industry during the Second World War, emerges now as a relative disadvantage. It may rank as number three in per-capita steel output in the world, but the products of its large and

overextended engineering industry are less and less competitive in world markets.

That poses the question of how to acquire foreign exchange to pay not only for imported fuel and food, but also modern mining and industrial equipment. In striking contrast with neighbouring Poland, the Czechoslovak Government is extremely cautious in its foreign borrowing. The external debt is put at only \$2.2bn.

With Western bankers concerned about the level of some Comecon countries' indebtedness, Czechoslovakia finds itself in the curious position of being urged, for example, by the Austrian and British Trade Ministers this month, to borrow from Western banks or to tap the Euromarkets. The Finance Minister, Mr. Leopold Ler, merely replied that he would think about it.

His name is associated with the much discussed "complex experiment of effectiveness and control," introduced in January 1978 for a period of three years in some 150 plants with almost half a million employees. This experiment to raise efficiency and quality and to reduce production costs cannot succeed without the granting of real financial rewards both to enterprises and individuals, or without a transition to realistic prices in order to gauge the real export and production performance of industry.

How can one motivate people to achieve a better performance without opening the floodgates of criticism? That is the real question behind the experiment, timid as it is compared with the economic reforms in neighbouring Hungary. Yet as long as Dr. Husak's regime can produce bananas from Colombia, oranges from Cuba, and tinned fruit juice from Greece on the stalls, in addition to an erratic but on the whole adequate supply of basic foodstuffs, relative political stability is unlikely to be endangered by pressures from below.

On the whole, however, the atmosphere is curiously apolitical, characterised not by sullen protest but by an admirable mastery of getting around the system.

On the face of it, an average wage earner must put down the equivalent of two years' earnings for a Skoda car, and over four years' for an imported Austin Allegro. But statistics are deceptive. Through a host of semi-legal and illegal activities, ranging from moonlighting and enforced tipping, to black market transactions and foreign exchange speculations equalling billions of crowns, many Czech families manage to lead quite a comfortable existence.

But the chilly wind of economic realities will force perhaps sooner than people realise — an agonising reappraisal of the subsidised price structure.

This may be the main reason why the so-called pragmatists, headed by Mr. Strougal and cautiously supported by President Husak, may gain in influence and why even Mr. Jakes, a trusted friend of the Soviet Union, now speaks about crops and sugarbeet rather than the "class enemy."

FINANCIAL TIMES, published daily except Sundays and holidays. U.S. subscription rate \$25.00 per annum. Second class postage paid at New York, N.Y. and at additional mailing offices.

## Atom waste inquiry opens

BY JONATHAN CARR IN BONN

A SIX-DAY hearing of international nuclear energy experts began in Hanover, the capital of Lower Saxony, yesterday. The outcome will be of importance for West Germany's own atomic energy plans.

At issue is whether burial in underground salt deposits is a suitable way of disposing of radioactive waste. The question is of immediate relevance since it is proposed to develop a nuclear fuel services centre at

Gorleben, Lower Saxony, and bury nuclear waste in the salt beneath it.

This project has not yet been given final approval by the State government and the result of the hearing is likely to influence its decision.

More than 60 experts from among other countries, the U.S., Britain, Sweden, Denmark and West Germany are taking part in the discussions which are being held in public.



## You'll be miles ahead after a good breakfast.

Quite apart from getting you to your destination quickly, Inter-City saves you having to stop to eat.

So you can travel fast and comfortably in a relaxed atmosphere.

And save a good deal of time into the bargain.

### Eat well, all day

On most early morning trains, you can pop into the restaurant car for breakfast while the train eats up the miles. You'll find a traditional English breakfast — the Grill Tray or grilled kippers — or a continental-style breakfast if you prefer. On trains with the Gold Star menu there's an even wider choice.

On many trains you can have lunch and, later on, afternoon tea or high tea if you fancy it. In the evening, you can have a very pleasant, relaxing dinner. Just the way to end a busy day. And the only way to have an evening out at the same time as going home.

Inter-City Have a good trip.

## Bank Leumi (U.K.) Ltd

Head Office: P.O. Box 2AF, 4-7 Woodstock Street, London W1A 2AF  
Tel: 01-839 1203

### Continued Growth and Development

Highlights from the Chairman's statement by Mr. E. I. Japhet at the Bank's Annual General Meeting

\* In 1978 the Bank experienced another year of continued development and growth. Due to no small measure to that expansion, profits for the year were higher than in 1977. The Directors propose to declare an increased final dividend of 5.52p per share making a total of 8.20p per share. (1977 — 7.36355p per share).

\* The number of accounts increased and there was also an increase in customer demand for loans and advances. Deposits from the public registered further growth.

\* The Bank's fourth London branch to be located at Gants Hill, Ilford is about to open. This is the Bank's second high street branch following the success of the Golders Green branch opened at the end of 1975.

\* Much effort was devoted to furthering the development of Anglo-Israeli trade. Additional services have been offered to those engaged in trade and in the exchange of technology and know-how between the two countries.

UNITED KINGDOM SUBSIDIARY OF

Bank Leumi בנק לאומי  
LE-ISRAEL B.M. לישראל ב.מ.

1902-1979

ISRAEL'S LARGEST BANKING GROUP



## Eanes rejects Mota Pinto's offer to quit

BY JIMMY BURNS IN LISBON

PORTUGAL'S four-month-old non-party Government has been given a temporary, if fragile, lease of life. This follows a five-day political crisis which threatened the country with early elections this summer.

A statement from the Presidential Palace yesterday said that President Antonio Telo had rejected Mota Pinto's offer to resign.

He had received his support from the Government and taken into consideration the political and economic situation of the country.

This was the first official confirmation that the Prime Minister had in fact offered his resignation, as had been widely expected following the Government's Budget defeat last week.

By opting to support Mr. Mota Pinto, rather than dissolving Parliament or calling for a new government, President Eanes is clearly taking a gamble on the government passing its next parliamentary test.

This will probably occur next month, when Mr. Mota Pinto presents a new 1979 Budget proposal and a revised short-term economic plan.

While accepting the President's support, the Prime Minister has made it clear that his Government has no intention of making any substantial amendments to its original economic plan, though it is prepared to show "some flexibility."

The extent of this flexibility will hold the key to its fate, as the country's main political parties still look like standing firm on their objections to a number of key items.

These items include the new tax on the 13th-month Christmas bonus, and the 18 per cent wage ceiling.

Clearly, President Eanes has reason to feel that the risk implied in his latest "political solution" is worth taking.

His firm statement of support for Mr. Mota Pinto's Government appears to have temporarily halted perhaps the most worrying development in Portugal's latest political crisis.

This is the increasing concern of the armed forces over what is seen as the divided, negative, and potentially destructive attitudes struck by the political parties.

Mr. Mota Pinto's Government is believed to be warmly backed by the country's chiefs of staff.

Equally immediate is the effect that political continuity will have on Portugal's potential creditors, not least the IMF.

An early election as a solution to last week's political deadlock would have almost certainly put an end to any chance of Portugal renegotiating its letter of intent.

The fund, however, is not expected to resume negotiations with the Portuguese Government until both the 1979 Budget and the short-term economic plan have safely passed Parliament.



## New doubt on health of Brezhnev

By David Satter in Moscow

RENEWED speculation about the health of President Leonid Brezhnev surfaced yesterday with the abrupt cancellation by the Soviet Union of the visit of M. Valery Giscard d'Estaing, the French President.

Diplomats said M. Bruno de Leusse, the French ambassador, was told 48 hours before the French leader was to arrive that the visit had to be put off because Mr. Brezhnev had severe influenza.

Tass news agency said the visit will take place in three weeks' time, but there is some doubt about this among observers. Despite periodic bouts of ill health, Mr. Brezhnev has never had to put off a major meeting with a foreign leader at such short notice.

The 72-year-old Soviet leader did not fall ill this winter as he has in previous years, but, before making a brief trip to Bulgaria in January, he said his colleagues were urging him to take a holiday.

The health of the ageing Soviet leadership is a closely held secret and senior Politburo members in their seventies have disappeared for periods of as long as three months without a word of explanation in the Government-controlled Press.

Mr. Brezhnev fell ill in the winter of 1977-78 and was out of public view for two periods of about a month each. He was also not seen for more than a month in late 1975 and early 1976, after reportedly coming down with pneumonia.

He is believed to have some long-term health problems, including a heart ailment, hearing difficulty, and jaw and dental problems which sometimes result in badly slurred speech.

His bad health appears to be cyclic. Diplomats who meet him are frequently impressed with his stamina but there are times when his appearance gives rise to reports that he is almost incapacitated.

Mr. Brezhnev appeared in good form when last seen in public, on March 22, embracing General Kriakos Chama-nand, the Thai Prime Minister, before a session of Kremlin talks.

## FORD'S MIXED FORTUNES IN SPAIN AND PORTUGAL

# Unrest shuts Fiesta plant again

BY ROBERT GRAHAM IN MADRID

FORD YESTERDAY closed its Almusafes plant near Valencia, after mounting labour unrest, and began an indefinite lock-out. In answer, Ford workers held violent protest demonstrations, and clashed with riot police in Valencia.

This is the second lock-out in six weeks at Almusafes, which produces the Fiesta. The deteriorating labour climate at Ford is fast becoming Spain's most bitter industrial dispute since unions were legalised in April 1977.

At the heart of the conflict is a struggle by management to ensure a tranquil labour force, and by the unions to establish a position of bargaining strength.

The lock-out would continue until the unions gave signs of willingness to let the plant operate normally, Ford said. Both sides seem ready for a long conflict.

The Communist-controlled CCOO, the main union at Ford, alleged that the company was deliberately taking a tough stance to "break the new legal powers the unions were trying to exercise."

Ford yesterday blamed the lock-out on continuing wildcat strikes and interruptions that were making normal production impossible.

The Almusafes plant has a workforce of 10,000, of which 8,200 are shop-floor workers. Since early January, when negotiations on a new wage and conditions agreement began, labour relations have become increasingly bitter.

The management has been offering a pay increase averaging 12 per cent, within the government-imposed limits. The union negotiating committee has been asking for slightly above the 14 per cent ceiling.

It has also been pressing a wide range of demands concerning union rights and new work conditions, including restrictions on Saturday work. This led to strikes on two Saturdays in January.

In mid-February, Ford carried out a three-day lock-out and suspended negotiations. The company also applied to the Labour Ministry for a "laudo"—a move equivalent to calling in Labour Ministry arbitration.

The union leadership saw this as a means of shifting responsibility, and as from February 15, began a ban on overtime, and a policy of "non-co-operation."

This had "degenerated into intimidation, harassment and violent picketing" of workers who sought to go against the union leadership, a Ford spokesman said.

He claimed the company had gathered evidence of harassment and violence by 13 persons. Eight of these were sacked on Monday and a further five on Tuesday.

But five of the sacked men were on the union negotiating committee and two were the heads of CCOO and a more radical union, CSUT.

The sackings immediately prompted protest stoppages in the plant, the dismissal of these key men being seen as a "provocation."

The unions claim that Ford was anxious to get rid of the main organisers, since the company had suffered serious loss of production from mid-February.

They also say the tough Ford attitude is being reflected in other plants owned by multinational auto-manufacturers in Spain, and point to problems at both Citroen and Renault in negotiating wage agreements.

At Chrysler in Madrid, a stoppage occurred on Tuesday after an overseer allegedly beat up a worker and fired shots in the air.

Typically, Ford was attracted to Spain, and particularly to non-industrialised Almusafes, because of the tranquil labour situation.

At Almusafes, it was able to recruit labour from the countryside without experience of organisation. Because of this, the main trade unions, since legalisation, have selected Ford as a company where they want to prove their strength.

Since the plant began operations in October 1978, the number of incidents has grown. In January last year, 58 workers were dismissed for various protest activities connected with wage negotiations.

While Mr. Henry Ford was visiting the plant last month, workers staged a strike, primarily to demonstrate their muscle.

Last year's wage negotiations were only resolved by arbitration after management-union talks had broken down.

But last November, when Ford in Britain was shut down, the plant did not go on a solidarity strike.

For the moment, Ford is saying that the labour unrest will not affect its decision whether or not to choose Spain as a site for European expansion.

In the past two weeks, the company is understood to have reversed its previous negative attitude towards Spain for up to \$450m of new investment alongside the existing Almusafes plant.

This is believed to be due, in part, to imminent changes in existing restrictive legislation regarding the Spanish motor industry.

Mr. Patrick Byrne, chairman of Ford Lusitania, said the new export programme would mean an increase in the Azambuja work force from 240 to 1,107.

The project is expected to help Portugal's ailing motor industry in its attempts to adapt to the country's future membership of the EEC.

Portuguese Government officials and Ford Europe are continuing discussions on a proposal to set up a new \$1bn assembly plant in Portugal.

The proposal centres on the development of a site at the industrial complex of Sines, near Lisbon.

But it is thought to have only an outside chance of being accepted by Ford, given the stronger challenge from both France and Austria.

A decision from Ford is expected by next month.

Mr. Patrick Byrne, chairman of Ford Lusitania, said the new export programme would mean an increase in the Azambuja work force from 240 to 1,107.

The project is expected to help Portugal's ailing motor industry in its attempts to adapt to the country's future membership of the EEC.

Portuguese Government officials and Ford Europe are continuing discussions on a proposal to set up a new \$1bn assembly plant in Portugal.

The proposal centres on the development of a site at the industrial complex of Sines, near Lisbon.

But it is thought to have only an outside chance of being accepted by Ford, given the stronger challenge from both France and Austria.

A decision from Ford is expected by next month.

Mr. Patrick Byrne, chairman of Ford Lusitania, said the new export programme would mean an increase in the Azambuja work force from 240 to 1,107.

The project is expected to help Portugal's ailing motor industry in its attempts to adapt to the country's future membership of the EEC.

Portuguese Government officials and Ford Europe are continuing discussions on a proposal to set up a new \$1bn assembly plant in Portugal.

The proposal centres on the development of a site at the industrial complex of Sines, near Lisbon.

But it is thought to have only an outside chance of being accepted by Ford, given the stronger challenge from both France and Austria.

A decision from Ford is expected by next month.

Mr. Patrick Byrne, chairman of Ford Lusitania, said the new export programme would mean an increase in the Azambuja work force from 240 to 1,107.

The project is expected to help Portugal's ailing motor industry in its attempts to adapt to the country's future membership of the EEC.

Portuguese Government officials and Ford Europe are continuing discussions on a proposal to set up a new \$1bn assembly plant in Portugal.

The proposal centres on the development of a site at the industrial complex of Sines, near Lisbon.

But it is thought to have only an outside chance of being accepted by Ford, given the stronger challenge from both France and Austria.

A decision from Ford is expected by next month.

Mr. Patrick Byrne, chairman of Ford Lusitania, said the new export programme would mean an increase in the Azambuja work force from 240 to 1,107.

The project is expected to help Portugal's ailing motor industry in its attempts to adapt to the country's future membership of the EEC.

Portuguese Government officials and Ford Europe are continuing discussions on a proposal to set up a new \$1bn assembly plant in Portugal.

The proposal centres on the development of a site at the industrial complex of Sines, near Lisbon.

But it is thought to have only an outside chance of being accepted by Ford, given the stronger challenge from both France and Austria.

A decision from Ford is expected by next month.

Mr. Patrick Byrne, chairman of Ford Lusitania, said the new export programme would mean an increase in the Azambuja work force from 240 to 1,107.

At Almusafes, it was able to recruit labour from the countryside without experience of organisation. Because of this, the main trade unions, since legalisation, have selected Ford as a company where they want to prove their strength.

Since the plant began operations in October 1978, the number of incidents has grown. In January last year, 58 workers were dismissed for various protest activities connected with wage negotiations.

While Mr. Henry Ford was visiting the plant last month, workers staged a strike, primarily to demonstrate their muscle.

Last year's wage negotiations were only resolved by arbitration after management-union talks had broken down.

But last November, when Ford in Britain was shut down, the plant did not go on a solidarity strike.

For the moment, Ford is saying that the labour unrest will not affect its decision whether or not to choose Spain as a site for European expansion.

In the past two weeks, the company is understood to have reversed its previous negative attitude towards Spain for up to \$450m of new investment alongside the existing Almusafes plant.

This is believed to be due, in part, to imminent changes in existing restrictive legislation regarding the Spanish motor industry.

Mr. Patrick Byrne, chairman of Ford Lusitania, said the new export programme would mean an increase in the Azambuja work force from 240 to 1,107.

The project is expected to help Portugal's ailing motor industry in its attempts to adapt to the country's future membership of the EEC.

Portuguese Government officials and Ford Europe are continuing discussions on a proposal to set up a new \$1bn assembly plant in Portugal.

The proposal centres on the development of a site at the industrial complex of Sines, near Lisbon.

But it is thought to have only an outside chance of being accepted by Ford, given the stronger challenge from both France and Austria.

A decision from Ford is expected by next month.

Mr. Patrick Byrne, chairman of Ford Lusitania, said the new export programme would mean an increase in the Azambuja work force from 240 to 1,107.

The project is expected to help Portugal's ailing motor industry in its attempts to adapt to the country's future membership of the EEC.

Portuguese Government officials and Ford Europe are continuing discussions on a proposal to set up a new \$1bn assembly plant in Portugal.

The proposal centres on the development of a site at the industrial complex of Sines, near Lisbon.

But it is thought to have only an outside chance of being accepted by Ford, given the stronger challenge from both France and Austria.

A decision from Ford is expected by next month.

Mr. Patrick Byrne, chairman of Ford Lusitania, said the new export programme would mean an increase in the Azambuja work force from 240 to 1,107.

The project is expected to help Portugal's ailing motor industry in its attempts to adapt to the country's future membership of the EEC.

Portuguese Government officials and Ford Europe are continuing discussions on a proposal to set up a new \$1bn assembly plant in Portugal.

The proposal centres on the development of a site at the industrial complex of Sines, near Lisbon.

But it is thought to have only an outside chance of being accepted by Ford, given the stronger challenge from both France and Austria.

## Consumer price rises slow down in France

By Robert Mauthner in Paris

FRENCH CONSUMER prices rose by 0.7 per cent in February, after increasing by 0.9 per cent in January. The result is considered relatively satisfactory by M. Rene Monory, the Economics Minister.

Over the past three months inflation has been running at an annual rate of about 8.5 per cent, marginally higher than the authorities' target for 1979, but roughly in line with the latest OECD forecasts for the French economy.

The French authorities do not believe that the latest oil price increase decided by the OPEC countries will have a great direct effect on the consumer price index in France.

The increases decided in Abu Dhabi last year had already been taken into account in the official forecasts for the French economy, and Tuesday's OPEC decision in Geneva is not expected to put more than about 0.2 to 0.3 per cent on to the consumer price index.

It is also recognised that the latest oil price rises could lead to slower economic growth in the second half of this year than predicted. According to the OECD, whose report on France was published before Tuesday's OPEC decision, the increase in GDP was in any case likely to be closer to 3 per cent in 1979 than the 3.7 to 4.0 per cent forecast by the authorities.

Unofficial French estimates now put the probable growth rate in the current rate at about 3.5 per cent.

The last two OPEC price rises combined are estimated to place an additional burden of some FF 8.5bn on France's balance of payments this year, and could produce a renewal trade deficit of some FF 2bn to 3bn this year, after a surplus of the same order in 1978.

## Dutch payments gap less than expected

BY CHARLES BATCHELOR IN AMSTERDAM

HOLLAND RECORDED a much over balance of payments current account deficit in 1978, has suggested by the most pessimistic estimates, thanks to a late revision of the figures.

The deficit was Fl 2.4bn (\$580m), Mr. Frans Andriessen, the Finance Minister, said in a note to Parliament. This compared with earlier official estimates of a deficit of up to Fl 3.5bn (\$850m), and private estimates as high as Fl 4bn (\$970m).

The improvement of Fl 1.1bn between official forecasts and the actual result was due to a series of minor corrections to previous estimates, the Finance Ministry said yesterday.

European Community transfers to Holland were higher than expected, the deficit on tourist spending was smaller, and some trade—notably oil products—was as at first registered as imports was later re-exported.

Set against the original estimates of a balance of payments surplus of Fl 6bn (\$1.45bn) in 1978, the final figures reveal a substantial worsening of the Dutch position. Last year's deficit was the first for seven

years and followed a surplus of Fl 1.4bn (\$340m) (revised from an earlier figure of Fl 1.1bn) the year before.

A new estimate for the balance of payments position this year will be included in the central economic plan due to be made public later.

By the Central Planning Office, the main Government forecasting organisation.

Finance Ministry figures for the final quarter of 1978 revealed a seasonally corrected deficit of Fl300m (\$73m), compared with a deficit of Fl800m (\$195m) in the third quarter and a surplus of Fl490m (\$118m) in the final 1977 quarter.

The unadjusted figure for the final 1978 quarter showed a surplus of Fl700m (\$170m), compared with a surplus of Fl1.2bn (\$290m) in the same 1977 quarter.

The deficit on visible trade rose to Fl1.6bn (\$388m) in the last three months of 1978, compared with a deficit of Fl1.1bn (\$266m) in the third quarter. Imports rose 4.5 per cent in value while exports were unchanged.

## Redemption Notice City of Oslo (Norway)

9% Sinking Fund External Loan Bonds due May 1, 1985

NOTICE IS HEREBY GIVEN, pursuant to Fiscal Agency Agreement dated as of May 1, 1970 under which the above described Bonds were issued, that Citibank, N.A., Fiscal Agent, has selected by lot for redemption on May 1, 1979 through the operation of the Sinking Fund, \$944,000 principal amount of said Bonds at the Sinking Fund redemption price of 100% of the principal amount thereof, together with accrued interest to the date fixed for redemption. The serial numbers of the Bonds selected by lot for redemption are as follows:

BOND NUMBERS															
24 112	3118	2846	4231	5874	7090	7964	8421	10464	12356	14428	15225	16210	17170	18072	19121
30 112	3123	2848	4236	5878	7093	7969	8426	10469	12359	14430	15229	16213	17173	18075	19124
36 112	3128	2853	4241	5883	7098	7974	8431	10474	12364	14435	15234	16218	17178	18080	19129
42 112	3133	2858	4246	5888	7103	7979	8436	10479	12369	14440	15239	16223	17183	18085	19134
48 112	3138	2863	4251	5893	7108	7984	8441	10484	12374	14445	15244	16228	17188	18090	19139
54 112	3143	2868	4256	5898	7113	7989	8446	10489	12379	14450	15249	16233	17193	18095	19144
60 112	3148	2873	4261	5903	7118	7994	8451	10494	12384	14455	15254	16238	17198	18100	19149
66 112	3153	2878	4266	5908	7123	7999	8456	10499	12389	14460	15259	16243	17203	18105	19154
72 112	3158	2883	4271	5913	7128	8004	8461	10504	12394	14465	15264	16248	17208	18110	19159
78 112	3163	2888	4276	5918	7133	8009	8466	10509	12399	14470	15269	16253	17213	18115	19164
84 112	3168	2893	4281	5923	7138	8014	8471	10514	12404	14475	15274	16258	17218	18120	19169
90 112	3173	2898	4286	5928	7143	8019	8476	10519	12409	14480	15279	16263	17223	18125	19174
96 112	3178	2903	4291	5933	7148	8024	8481	10524	12414	14485	15284	16268	17228	18130	19179
102 112	3183	2908	4296	5938	7153	8029	8486	10529	12419	14490	15289	16273	17233	18135	19184
108 112	3188	2913	4301	5943	7158	8034	8491	10534	12424	14495	15294	16278	17238	18140	19189
114 112	3193	2918	4306	5948	7163	8039	8496	10539	12429	14500	15299	16283	17243	18145	19194
120 112	3198	2923	4311	5953	7168	8044	8501	10544	12434	14505	15304	16288	17248	18150	19199
126 112	3203	2928	4316	5958	7173	8049	8506	10549	12439	14510	15309	16293	17253	18155	19204
132 112	3208	2933	4321	5963	7178	8054	8511	10554	12444	14515	15314	16298	17258	18160	19209
138 112	3213	2938	4326	5968	7183	8059	8516	10559	12449	14520	15319	16303	17263	18165	19214
144 112	3218	2943	4331	5973	7188	8064	8521	10564	12454	14525	15324	16308	17268	18170	19219
150 112	3223	2948	4336	5978	7193	8069	8526	10569	12459	14530	15329	16313	17273	18175	19224
156 112	3228	2953	4341	5983	7198	8074	8531	10574	12464	14535	15334	16318	17278	18180	19229
162 112	3233	2958	4346	5988	7203	8079	8536	10579	12469	14540	15339	16323	17283	18185	19234
168 112	3238	2963	4351	5993	7208	8084	8541	10584	12474	14545	15344	16328	17288	18190	19239
174 112	3243	2968	4356	5998	7213	8089	8546	10589	12479	14550	15349	16333	17293	18195	19244
180 112	3248	2973	4361	6003	7218	8094	8551	10594	12484	14555	15354	16338	17298	18200	19249
186 112	3253	2978	4366	6008	7223	8099	8556	10599	12489	14560	15359	16343	17303	18205	19254
192 112	3258	2983	4371	6013	7228	8104	8561	10604	12494	14565	15364	16348	17308	18210	19259
198 112	3263	2988	4376	6018	7233	8109	8566	10609	12499	14570	15369	16353	17313	18215	19264
204 112	3268	2993	4381	6023	7238	8114	8571	10614	12504	14575	15374	16358	17318	18220	19269
210 112	3273	2998	4386	6028	7243	8119	8576	10619	12509	14580	15379	16363	17323	18225	19274
216 112	3278	3003	4391	6033	7248	8124	8581	10624	12514	14585	15384	16368	17328	18230	19279
222 112	3283	3008	4396	6038	7253	8129	8586	10629	12519	14590	15389	16373	17333	18235	19284
228 112	3288	3013	4401	6043	7258	8134	8591	10634	12524	14595	15394	16378	17338	18240	19289
234 112	3293	3018	4406	6048	7263	8139	8596	10639	12529	14600	15399	16383	17343	18245	19294
240 112	3298	3023	4411	6053	7268	8144	8601	10644	12534	14605	15404	16388	17348	18250	19299
246 112	3303	3028	4416	6058	7273	8149	8606	10649	12539	14610	15409	16393	17353	18255	19304
252 112	3308	3033	4421	6063	7278	8154	8611	10654	12544	14615	15414	16398	17358	18260	19309
258 112	3313	3038	4426	6068	7283	8159	8616	10659	12549	14620	15419	16403	17363	18265	19314
264 112	3318	3043	4431	6073	7288	8164	8621	10664	12554	14625	15424	16408	17368	18270	19319
270 112	3323	3048	4436	6078	7293	8169	8626	10669	12559	14630	15429	16413	17373	18275	19324
276 112	3328	3053	4441	6083	7298	8174	8631	10674	12564	14635	15434	16418	17378	18280	19329
282 112	3333	3058	4446	6088	7303	8179	8636	10679	12569	14640	15439	16423	17383	18285	19334
288 112	3338	3063	4451	6093	7308	8184	8641	10684	12574	14645	15444	16428	17388	18290	19339
294 112	3343	3068	4456	6098	7313	8189	8646	10689	12579	14650	15449	16433	17393	18295	19344
300 112	3348	3073	4461	6103	7318	8194	8651	10694	12584	14655	15454	16438	17398	18300	19349
306 112	3353	3078	4466	6108	7323	8199	8656	10699	12589	14660	15459	16443	17403	18305	19354
312 112	3358	3083	4471	6113	7328	8204	8661	10704	12594	14665	15464	16448	17408	18310	19359
318 112	3363	3088	4476	6118	7333	8209	8666	10709	12599	14670	15469	16453	17413	18315	19364
324 112	3368	3093	4481	6123	7338	8214	8671	10714	12604	14675	15474	16458	17418	18320	19369
330 112	3373	3098	4486	6128	7343	8219	8676	10719	12609	14680	15479	16463	17423	18325	19374
336 112	3378	3103	4491	6133	7348	8224	8681	10724	12614	14685	15484	16468	17428	18330	19379
342 112	3383	3108	4496	6138	7353	8229	8686	10729	12619	14690	15489	16473	17433	18335	19384
348 112	3388	3113	4501	6143	7358	8234	8691	10734	12624	14695	15494	16478	17438	18340	19389
354 112	3393	3118	4506	6148	7363	8239	8696	10739	12629	14700	15499	16483	17443	18345	19394
360 112	3398	3123	4511	6153	7368	8244	8701	10744	12634	14705	15504	16488	17448	18350	19399
366 112	3403	3128	4516	6158	7373	8249	8706	10749	12639	14710	15509	16493	17453	18355	19404
372 112	3408	3133	4521	6163	7378	8254	8711	10754	12644	14715	15514	16498	17458	18360	19409
378 112	3413	3138	4526	6168	7383	8259	8716	10759	12649	14720	15519	16503	17463	18365	19414
384 112	3418	3143	4531	6173	7388	8264	8721	10764	12654	14725	15524	16508	17468	18370	19419
390 112	3423	3148	4536	6178	7393	8269	8726	10769	12659	14730	15529	16513	17473	18375	19424
396 112	3428	3153	4541	6183	7398	8274	8731	10774	12664	14735	15534	16518	17478	18380	19429
402 112	3433	3158	4546	6188	7403	8279	8736	10779	12669	14740	15539	16523	17483	18385	19434
408 112	3438	3163	4551	6193	7408	8284	8741	10784	12674	14745	15544	16528	17488	18390	19439
414 112	3443	3168	4556	6198	7413	8289	8746	10789	12679	14750	15549	16533	17493	18395	19444
420 112	3448	3173	4561	6203	7418	8294	8751	10794	12684	14755	15554	16538	17498	18400	19449
426 112	3453	3178	4566	6208	7423	8299	8756	10799	12689	14760	15559	16543	17503	18405	19454
432 112	3458	3183	4571	6213	7428	8304	8761	10804	12694	14765	15564	16548	17508	18410	19459
438 112	3463	3188	4576	6218	7433	8309	8766	10809	12699	14770	15569	16553	17513	18415	19464
444 112	3468	3193	4581	6223	7438	8314	8771	10814	12704	14775	15574	16558	17518	18420	19469
450 112	3473	3198	4586	6228	7443	8319	8776	10819	12709	14780	15579	16563	17523	18425	19474
456 112	3478	3203	4591	6233	7448	8324	8781	10824	12714	14785	15584	16568	17528	18430	19479
462 112	3483	3208	4596	6238	7453	8329	8786	10829	12719	14790	15589	16573	17533	18435	19484
468 112	3488	3213	4601	6243	7458	8334	8791	10834	12724	14795	15594	16578	17538	18440	19489
474 112	3493	3218	4606	6248	7463	8339	8796	10839	12729	14800	15599	16583	17543	18445	19494
480 112	3498	3223	4611	6253	7468	8344	8801	10844	12734	14805	15604	16588	17548	18450	19499
486 112	3503	3228	4616	6258	7473	8349	8806	10849	12739	14810	15609	16593	17553</		



# S. Africa boosts defence spending, cuts taxes in expansionary budget

BY QUENTIN PEEL IN JOHANNESBURG

A BIG INCREASE in defence spending, combined with major tax concessions, was announced in a significantly expansionary South African budget yesterday.

The measures proposed by Senator Owen Horwood, the Minister of Finance, include a return to foreign borrowing by the South African Government to the tune of R200m (£118m), and a 5 per cent cut in the existing import surcharge to 7.5 per cent.

In what amounts to a major stimulation of the economy, at a time when the falling economic revival has been jeopardised by increases in fuel prices, Senator Horwood announced direct tax concessions totalling more than R760m (£447m), concentrated largely on cuts in personal income taxes and increased allowances. Companies have also won tax concessions with a reduction in the loan levy from 15 to 10 per cent.

and a special concession for the gold- and diamond-mining houses, scrapping the 24 per cent tax surcharge they pay.

Defence spending is the only category of government spending to show a significant increase, rising by some 20 per cent from R1.5bn (£882m) to R1.8bn. The big rise compares with significant under-spending on defence in the past year, itself a reflection of the mandatory UN arms embargo on South Africa.

The budget for the coming year suggests that the South African Defence Force is confident of finding willing sellers of the equipment it needs.

Overall government spending is scheduled to increase by less than 12 per cent, or little faster than the current 11.3 per cent inflation rate. Sen. Horwood said his intention was to stimulate the economy by injecting money into the private

sector without simultaneously boosting government spending.

However, the other major areas of Government concern, apart from defence — energy supplies and black development — received special attention. The budget of Soekor, the Government oil-exploration company, is to be increased from R20m to R37m, to cover an acceleration in the offshore oil exploration programme.

The R3.3bn expansion of the Sasol oil-from-coal project gets an initial R150m of direct Government cash in the coming year. Sen. Horwood added that he expected private investors to provide at least R500m towards the cost of the project.

While the major impact of tax concessions is on white taxpayers, the budget raises the tax threshold for black taxpayers, and also includes a special R20m subsidy for bread prices.

Another significant move to woo the black population is a 60 per cent increase in the amount of money set aside for consolidation of the tribal homelands.

Sen. Horwood said that he expected the country to raise R200m on the international capital market in the coming year — a reflection of South Africa's improved international credit rating. Most of the money had already been secured, he said.

South Africa had a balance of payments current account surplus of R1.3bn in 1978, but a continuing outflow of capital, particularly on the short-term account, reduced the overall surplus to less than R500m. But Sen. Horwood said that the economy now required sustained growth "in keeping with our long-term potential." He forecast a growth rate of 4 per cent in 1979 compared with 2.5 per cent last year.

## Brazilian strikers go back to work

By Rik Turner in Sao Paulo

THE STRIKE by 200,000 metalworkers in Sao Paulo's Santo Andre, Sao Bernardo and Sao Caetano (ABC) industrial district ended yesterday, after Sr. Luis Inacio da Silva (known as Lula), the union leader, deposed by the Government on March 23, had negotiated an interim agreement which put a 45-day limit on the Government takeover of the union leadership.

Since the Government intervention last Friday, the metal-

# Bergsten opposes critics of World Bank policies

BY STEWART FLEMING IN NEW YORK

MR. FRED BERGSTEN, Assistant Secretary of the U.S. Treasury, has come to the defence of the World Bank after Congressional criticisms that the international lending agency is excessively generous with its staff and deficient in public accountability.

The World Bank is seeking a \$40bn increase in its capital by the early 1980s. A substantial proportion of this amount would be paid by the 132 countries which are shareholders in the institution.

Mr. Eugene Rotberg, vice-president and treasurer of the World Bank, earlier this week expressed confidence that the increase in capital would be approved.

The World Bank has, however, come under criticism from the House Foreign Operations Subcommittee, headed by Mr. Clarence Long, a persistent critic of the foreign lending institutions.

The committee published a report critical of the aid which the U.S. gives to agencies which, the study claimed, waste millions of dollars.

Mr. Bergsten, in testimony before the subcommittee, characterised the bank and its lending agencies as "the most efficient and cost-effective agencies for economic and social progress in the developing world."

The attack on the bank has clearly angered and worried officials. Mr. Rotberg, questioned about the Congressional

report, described it as "mediocre," saying that Congress would not be impressed by the document, and questioning the subcommittee's motivation.

Commenting at a press briefing in New York on the Bank's activities, he emphasised the bank's improving profitability and the efficiency with which it is raising funds around the world through bond issues.

He estimated that profits for the 1978 fiscal year, ending in June, would rise to between \$350m and \$400m, compared with 1977's \$238m. He predicted that, in the next financial year, the institution would raise about \$5bn of funds which could be lent, and said the World Bank had never suffered a loss on any of its loans.

## India faced with shortages

By K. K. Sharma in New Delhi

A WARNING that the Indian economy will face shortages in key industrial areas as a result of the pick up in demand since last year has been sounded by Mr. James Raj, chairman of the Industrial Credit and Investment Corporation of India. The ICICI is one of the major industrial financial institutions in the country.

Mr. Raj said that the revival of demand has already led to shortages in key sectors like steel and cement.

The Government has arranged for imports of 1m tonnes of steel and about 3m tonnes of cement to meet the current shortages.

But Mr. Raj warned that "imports cannot be a substitute for the creation of industrial capacity in the country."

Fortunately, policy-makers now have more options for dealing with the situation than at any time in the last 20 years.

# UK hope on Iran defence orders

BY SIMON HENDERSON IN TEHRAN

BRITAIN is expected to start negotiations of its defence contracts with the new Iranian government in about a month amid signs that cancellations of western military orders in Iran might not be as high as originally feared.

Mr. Ali Ardalan, the Finance Minister, had previously said all contracts not regarded as necessary would be cancelled with competition. But Rear Admiral Ahmad Madani, the Defence Minister, said on Tuesday that Iran was prepared to sell back to the U.S. sophisticated F-14 Tomcat fighters and two secret Phoenix air-to-air missiles. America has been worried that this equipment could fall into Soviet hands.

Revival of British contracts to sell 1,300 advanced Chieftain tanks and tracked Rapier missiles seems unlikely, but hope is expressed that a naval

training role and spare contracts for earlier Chieftain and Rapier deliveries will be reactivated. In the last days before the revolution, the Government of Dr. Bakhtiari indicated it would cancel \$15bn of defence contracts with the West, but never did so formally.

In an interview Admiral Madani also said Iran needed and would be willing to employ foreign experts to help its armed forces although not the same people as before. He referred to the French, West German, British and Japanese as being acceptable nationalities. He said technicians, by implication American, would also be needed to maintain the fleet of more than 500 helicopters supplied to the Shah by Bell and Boeing Vertol.

The Admiral, who was sacked by the Shah for his opposition to the exiled monarch's desired

police role in the Indian Ocean, said Iran was still interested in buying between two and four Spruance class destroyers each worth \$500m from Litton Industries in the U.S., and between three and six of the type 208 submarines worth \$500m from West Germany. The Spruance contract had been thought to have been cut to two ships and the West German contract cancelled completely.

Meanwhile fighting continued for the third day running in the Turkmen town of Gombad-e-Kabus in north-east Iran yesterday despite official claims that a ceasefire was agreed on Tuesday night. Reports from the Turkmen, an important ethnic minority in the country, claim that the death toll in clashes with supporters of Ayatollah Khomeini and the central Government had reached 40.

workers have shown they are determined to continue their strike, particularly since Lula took control of the strike again on Sunday.

Large sections of the public, locally and nationally, as well as other unions and members of the official Opposition party, the Brazilian Democratic Movement (MDB), had rallied to the strikers, and the Government must be questioning its own wisdom in taking such an authoritarian line so soon after taking office.

The "Brazilian miracle" of 1968 to 1974, with its rapid industrialisation and booming exports, was made possible only by rigid control of wages and the curbing of labour from decision-making.

While GDP has increased since 1968 at a rate of 10 per cent a year, and productivity has grown by 5 per cent a year, the real value of earnings has fallen to such an extent that this year the metalworkers were claiming 34 per cent increases above the official rise calculated by the Government, in an effort to keep pace with inflation. This extra 34 per cent was an estimate of the loss in workers' buying power since 1964 made by the Interunion Department of Socio-Economic Statistics and Studies (DIESE). A worker earning the official minimum wage had to work 87 hours a week to buy the official basic diet in December, 1965. In March, 1977, this figure had risen to 167 hours. In 1972, 52 per cent of the working population received the minimum wage, and estimates are that if present trends continue, the figure could be over 60 per cent by 1980.

Wage control was made possible in 1963, when a system was set up whereby the Government decided wage rises once a year, on the basis of a formula which has never publicly been revealed.

This year's strike was important because it was not declared just to back up claims for higher wages, but also to press demands for changes in union organisations. The union's demand was that union leaders, each representing 500 workers, should be appointed to improve representation and strengthen the union movement inside the big car factories of the ABC.

deficit of \$1.45bn (£604m), about the same as the actual deficit in the year just ending. Spending will be up 11.7 per cent, largely because of inflation in the cost of social services and heavy pay demands by public-sector workers. He moved to ease the impact slightly of income-tax on people earning \$30,000 (£12,500) and above and improved the tax position of salesmen and professionals

# Bank of China and Japan near loan pact

TOKYO — A Japanese banking syndicate and the Bank of China may reach agreement shortly in Peking on terms of a \$2bn loan and a \$6bn short-term refinancing facility.

They may now agree on a 41 year loan at LIBOR plus 0.5 per cent and a six-month refinancing facility at LIBOR plus 0.25 per cent, the sources said.

The syndicate previously pro-

posed a rate of LIBOR plus 0.625 per cent for a five-year loan and LIBOR plus 0.375 per cent for the refinancing facility. If agreement is reached, the Japanese delegation will take it back to Japan for approval by the syndicate members and the Japanese government, after which its signing would take place in Tokyo or Peking.

A total of 22 Japanese banks

are participating in the loan and 31 banks in the refinancing facility.

But it is not yet 100 per cent certain that the terms now being discussed, in Peking would be approved by the finance ministry, which, fearing foreign criticism if the loan rates are too low, has been closely following the negotiations.

# Japan acts to dampen price rises

BY RICHARD C. HANSON IN TOKYO

JAPANESE MONETARY authorities have stepped up a cautious campaign to head off large price increases this year, an effort which will be seriously jeopardised by the OPEC decision to raise oil prices.

Tuesday, just before OPEC announced its decision to raise the base price of its oil and allow free choice on additional surcharges by member states, the Bank of Japan informed the 13 major commercial banks that the ceiling on new loans from April to June will be 10.1 per cent lower than a year ago. The banks had wanted an increase of about 10 per cent.

This will mean that the

annual rate of increase in the outstanding balance of commercial loans will decline to about 8.2 per cent by the end of June from the estimated 8.6 per cent at the end of this month. Last year loans were rising at 9.5 per cent and 9.4 per cent respectively in the first and second quarters.

The impact of this action is almost entirely psychological and amounts to an official warning to the business community not to step up spending in anticipation of higher inflation later.

The private sector, however, can choose to ignore this warning simply because most businesses are highly liquid. Funding of private fixed capital

spending in the fiscal year from April 1, for example, will be nearly three-quarters from internal company resources.

The Bank of Japan announcement to the banks thus will have little actual deflationary effect but could put a chill on business thinking. The official government view still to push the economy toward higher growth rates in line with the forecast for 6.3 per cent growth next year.

The contradiction between the Bank of Japan's intentions and official government policy will probably not be resolved until after the June 28-29 summit meeting of major industrial nations to be held in Tokyo.

## FO downgrades Nicaragua

By David Tonge

BRITAIN is downgrading its diplomatic relations with Nicaragua in protest at what it calls "gross and widespread violation of human rights" by the Somoza regime. The Foreign Office does not have an embassy in Managua, but deals through the embassy in Costa Rica.

The new British ambassador to Costa Rica, Mr. J. Michael Brown, will not be accredited to Managua. Britain's non-resident ambassador will be replaced by a non-resident chargé d'affaires. Nicaragua has not had an ambassador in London since 1975.

## U.S. INFLATION

Profits under the microscope

BY STEWART FLEMING IN NEW YORK

WHEN the Carter Administration launched its "voluntary" anti-inflation programme in October last year, it was difficult to find one leader of a major American corporation prepared publicly to attack the proposals.

In private there was profound scepticism about the plan having a measurable impact in curbing inflation as quickly as the public expected.

But the main thing was to avoid being saddled with any blame for the anticipated failure of the guidelines. Business leaders decided that there was nothing to be gained from fighting the programme, and much to be gained from offering qualified support.

The announcement last week that corporate profits by the end of 1978 were running at an annual rate of between 16 and 26 per cent higher than in 1977 is threatening this strategy, and could embolden companies in future, but potentially damaging arguments about their role in fuelling inflation.

In the wake of the profits announcement, Mr. Alfred Kahn, President Carter's chief inflation fighter, warned that profit increases on this scale only made it harder for the Administration to persuade organised labour to keep wage demands within the 7 per cent limit. But he has been careful to point out that profitability is necessary to stimulate capital investment.

President Carter's senior political adviser, Mr. Hamilton Jordan, was rather less subtle, stating baldly: "We think profits are unnecessarily high" and warning that the Administration was planning "to take steps to deal with that."

Mr. George Meany, president of the AFL-CIO, organised

labour's umbrella group, was even more blunt, accusing companies of "price gouging."

Business leaders admit to being profoundly disturbed by this rhetoric. The U.S. Chamber of Commerce said that "profits data cannot be used as a scapegoat for bad Government policies that are causing inflation."

The most powerful business lobby, the Business Round Table, has also weighed in with a report, circulated to Congress, the Administration and the Press, prepared by economists at General Electric.

This argues that the surge in profits in the fourth quarter of last year was "not due to prices, which rose at about the same rate (6.9 per cent) in the fourth quarter as they did in the year as a whole. The real cause was the increased volume of business," the brief says.

The spectacular real growth rate at a time when business was operating close to capacity and unit costs falling rapidly as output increased, made a profits boom almost inevitable.

There were some special factors at work too. The steel industry saw its profits more than double last year, along with the airlines, in spite of price cutting. Banking profits increased by over a fifth and on-ferrous metals profits by over one third.

The profits issue will not disappear immediately and the Business Round Table is likely to have to keep pounding away with its claims that because of inventory profits and under-depreciation, "real" profits are much less buoyant than they appear.

Corporate profits are highly sensitive to trends in gross national product, and so far there is no sign of a sharp slow-

down in output. Economists are forecasting real growth in the first quarter of 2 to 4 per cent, in which case first quarter profits are going to look buoyant too, especially in comparison with 1978's depressed first quarter.

The oil industry is already worried that it could be heading for another bout of oil company phobia as motorists measure corporate profits (including windfall gains) against petrol price increases and warnings of shortages.

But it is more than public opprobrium that worries the corporations. Already the Administration is making it clear that it is concerned about the effectiveness of the price guidelines, particularly as they apply to medium and smaller-sized companies.

It has taken some largely symbolic steps, like bringing banks within the guidelines, and some practical like permitting only quarterly increases in prices instead of bigger six monthly rises to block some of the holes.

A possibly ominous element in the banking decision was to offer a dividend limitation option for banks which could not meet other tests.

Industry naturally fears further steps will with mounting speculation that credit controls or mandatory price and wage controls could emerge.

President Carter has consistently declared himself firmly opposed to a mandatory programme. But a public perception that business is not playing fair and is profiting too much from inflation makes it all the easier for Washington to argue that tougher measures are needed.

## Dubai, Abu Dhabi rift grows

By Kathleen Bishawi

RELATIONS between Dubai and Abu Dhabi took a further downward turn yesterday with the rejection by Dubai of the 10-point memorandum submitted to the Supreme Council of seven rulers by the UAE National Assembly.

The demands were considered presumptuous by Dubai and Ras al Khaimah, both of which interpreted them as a start to the erosion of the powers of ruling sheiks.

The two Emirates stayed away from a Supreme Council meeting yesterday, saying that they felt too much pressure was being applied to them by Abu Dhabi.

In reply, Dubai called for mediation from friendly Gulf states. The task may fall on Qatar or Kuwait, observers believe.

# Power struggle in Kabul

BY DAVID HOUSEGO

FRESH SIGNS of a power struggle within the pro-Communist leadership in Afghanistan have emerged with the announcement yesterday in Kabul that Mr. Hafizullah Amin, the Foreign Minister, is to become Prime Minister.

Mr. Nur Mohammed Taraki, the former Prime Minister, is to retain what seems the largely honorific title of President of the country. The changeover comes at a time when the regime seems increasingly threatened by insurgency movements in the provinces and unrest in Kabul.

Mr. Amin, for some time the most powerful figure in the government, was the main advocate of the Treaty of Friendship with Russia signed in December. The Russians are, however, believed to have been embarrassed by his openly pro-Soviet views as undermining the independence of the regime and thus diminishing its popu-

larity in the eyes of Afghans. In this sense they may not welcome what appears to have been the removal of President Taraki from the key executive post by his main rival, the Russian Minister.

Mr. Amin, alone, whereas in the past his forceful views have been partially offset by the influence of Mr. Taraki.

Though the change in one sense means a further gain in Russian influence in Afghanistan, in another sense it means that the Russians find themselves increasingly committed to an unpopular narrowly-based regime in Afghanistan.

Mr. Taraki's removal could not have taken place without the active support of the small band of Khalq party supporters in the armed forces who brought him to power in April last year and who are now the mainstay of the regime. It is among this group that Mr. Amin's influence is strongest.

## FO downgrades Nicaragua

By David Tonge

BRITAIN is downgrading its diplomatic relations with Nicaragua in protest at what it calls "gross and widespread violation of human rights" by the Somoza regime. The Foreign Office does not have an embassy in Managua, but deals through the embassy in Costa Rica.

The new British ambassador to Costa Rica, Mr. J. Michael Brown, will not be accredited to Managua. Britain's non-resident ambassador will be replaced by a non-resident chargé d'affaires. Nicaragua has not had an ambassador in London since 1975.

# Yemen war stalemate as Iraq neutralises Soviet moves

BY MICHAEL TINGAY, RECENTLY IN SANAA

THE Yemen Arab Republic, a mountainous, thickly populated country in the south west corner of Arabia, is where the U.S. has decided to face what it sees as Soviet-backed aggression in the Middle East. After war broke out last month with Marxist South Yemen (The Peoples Democratic Republic of Yemen) the U.S. rushed arms into the YAR and has started a programme to strengthen its armed forces.

Those forces, the most important prop of President Ali Abdullah Saleh's regime, were unable to meet either the military or the political challenge of the war on the southern border. Had it not been for threats from Iraq (acting with the consent of Saudi Arabia and under the umbrella of the Arab League) forces of the opposition National Democratic Front, backed by regular PDY troops with Cuban and Soviet support, would have cut off the southern part of the YAR and, very likely, brought down the regime.

Yesterday the presidents of the two Yemens met in Kuwait in an attempt to reconcile their differences.

Arabic Yemeni politics would be of academic interest to the West but for the proximity of Saudi Arabian oil supplies. Aden's aggressive initiative and Washington's measured response underline the dangers of pursuing a strategic East-West struggle on Yemeni terrain. Sanaa is already furious with the U.S. for the publicity given to the \$370m arms package for the YAR, and Saudi Arabia is embarrassed at its dependence on an ally of whose Middle East policies it cannot approve.

The Republic in North Yemen, the outcome of a civil war in the 1960s with no clear victor even though it saw an end to the old royal dynasty, is not a State in the normal sense with sovereign territory controlled by national forces and governed by a central authority. Alliances in what remains a very tribal society are always opportunistic and often trans-

sient. The only consistent fact about them is their impermanence. Government is a fragile weave of internal and external "understandings." The armed forces and political parties are the tools of tribal and individual interests.

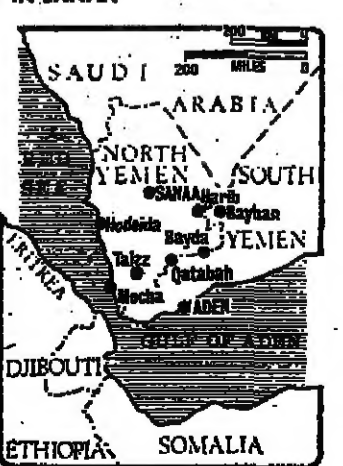
President Saleh's problems are inherited as well as of his own making. When he became President in August 1978, his predecessor, President Ghasshi, who was blown up by a bomb carried by an envoy from Aden, had already alienated two key army figures, Lt-Col. Abdullah Abdel Aleem, head of the paratroops, and Mujahid al-Qoholi, a senior commander.

The former had been demoted after the dissolution of the Revolutionary Command Council of which he had been a member. The latter is a member of the Bakil tribal confederation against whom Ghasshi had intervened by interfering in tribal matters. Instability in the YAR is often simplistically analysed in terms of conflict between the

dominant Shi'ite northern tribes, and the tribes who belong to the Zaidi sect, southern traders and farmers of the Shafai persuasion, an orthodox Sunni sect. But these two defectors who now lead the NDF, are a Zaidi tribesman and a southern Shafai populist.

To add to his complications, President Saleh angered Abdullah al-Ahmar, paramount chief of the Hashid tribal confederation. Saleh is beholden to Sheikh Ahmar in the tribal scheme of things, but passed him over when filling the key post of chairman of the consultative assembly. Al-Ahmar responded by returning Sanaa and the north to its customary status as a "no-go zone" for troops and government officials from Sanaa.

The domestic scene in which February's NDF and South Yemeni attacks were launched was aggravated by foreign interference. In October 1978, Libya gave \$2m to an abortive coup attempt by Bakil officers and Shafai politicians. A dozen



were hanged and thousands of radicals of the Nasserite variety were rounded up for questioning. Uncovered in the process was a separate plot and several hundred Baathists were locked up.

Only continued support from Saudi Arabia enabled President Saleh to survive, but he was greatly weakened. The Armed Forces, meanwhile, were debilitated. The first phase, a Saudi financed U.S. arms package, pledged in 1973, was slow to arrive. Aged Soviet tanks and aircraft had not been replaced. The reason for the delay appears to have been Riyadh's apprehensions about the populous North Yemen with its 6m inhabitants and preference for having a weak regime in Sanaa. Meanwhile, the lack of political consensus had badly undermined military discipline.

Soviet BM 21 rockets, heavy artillery and T-54 tanks gave cover for the four-front advance from the south on February 19. YAR defenders had never fought such a modern military machine.

There is no positive evidence that non-Arab troops crossed the border but one regiment of Cubans and perhaps 1,200 Soviet advisers in the PDY gave logistical and communications support and probably assisted in the back-up. Feeling impotent, Saudi Arabia turned to Iraq with which it had

concluded a loose security agreement in January in response to the common threat in Iran.

It was these factors that stopped the fighting. The massive airlift from Saudi Arabia and help from the U.S. with ammunition and light arms was not important.

The West's great problem is that U.S. support by way of weapons supplies can be a liability politically and ineffective militarily. In Taiz, a senior army commander complained "F5s are inferior to the Russian MIGs in the south but the PDY will still shout about escalation and American imperialism." It would take one to two years to rebuild the army structure before the YAR could plausibly pretend to defend itself, anyway.

After the military crisis Sanaa faces the political reckoning. The auction for political alliances is now on. External and internal prices are being arranged in the best Yemeni tradition. Internally the

Baathists and Bakil tribes seem to be in a strong position. At the same time the Hashid confederation will always be vital to any Government. Externally Saudi Arabia remains the prime influence. Riyadh continues to supply funds to the Government and to the tribes separately.

Saudi Arabia may have to accept Iraq—one of the biggest aid donors to the YAR—as a permanent ally in the region against Aden, a hard but necessary dependency for the House of Saud to accept. Baathism has always been feared intensely by the regime in Riyadh but there is a common enemy. Baghdad has never forgiven Aden for crushing the South Yemeni Baath Party meanwhile Iraq is now active on the alert against the Soviet Union following the discovery of the 1977 communist plot in the penetration in the Iraqi army and Moscow-inspired coup in Afghanistan. As one Yemeni in Sanaa put it "Baathism has roots here and Riyadh has no choice but to accept it now."



## Oslo confirms full support for shipping industry

BY IAN HARGREAVES

THE NORWEGIAN Guarantee Institute for ships and oil rigs renegotiating the terms of several agreements with banks and shipowners, but this does not indicate an unwillingness to support its shipping industry.

This assurance was given in London yesterday by Mr. Hallvard Bakke, the Norwegian Trade and Shipping Minister, who said the results of each negotiation would depend upon the willingness of all parties to make compromises about their share of financial exposure.

Where such compromises are not forthcoming, the institute, which was set up by the Government in 1975, had the right to withdraw and take the

necessary financial losses. So far such losses totalled less than \$0.5m.

The Government's commitment to bolstering its shipowners was placed in doubt last year during the renegotiation of one of the institute's largest guarantees for the troubled Reksten tanker group, for which Hambros Bank of London is a major creditor.

Mr. Bakke said that the Norwegian Parliament's recent acceptance of an extension to the guarantee system, whereby financially secure shipowners can buy secondhand ships with a 30 per cent Government-backed credit, was evidence of long-term commitment.

The Government has earmarked \$30m of the \$100m still remaining in the institute's

funds to support this scheme, which has not so far been taken up by any owner.

Mr. Bakke, whose left-wing politics have made him a subject of deep suspicion among Norwegian shipowners, said the Government remained absolutely committed to the shipping industry, which provided 6 per cent of the country's gross national product even in a depressed year like 1978.

He made it clear, however, that the Government will continue to resist demands from Norwegian owners for greater freedom in transferring ships to cheaper foreign flags.

The Government wanted Norwegian companies to be simple in structure and clearly based in Norway in order to strengthen national control.

## Hovercraft outlook 'glittering'

BY LYNTON McLAINE

THE GREATEST demand for hovercraft in the 1980s is expected to come from developing nations, Mr. Roy McLeavy, vice editor of *Yacht Surface*, says in a foreword to the latest edition published last year.

Hovercraft are likely to be used in Africa, Central and South America, on Pacific islands and in China. These markets offered "glittering prospects" for the industry, with equipment used as amphibious trucks, freighters, light transports, barges, excavators and drill platforms, rice harvesters, cattle wagons and mobile hospitals.

Mr. McLeavy says that the low level of skill needed to build hovercraft make them ideal for local construction. He could provide work with a number of international funding programmes.

The experience of British hovercraft manufacturers is still

unmatched in the world, but the drive to sell the technology to Third World nations "will stir up stiff competition." The U.S., Canada, Japan, China and the Soviet Union have designed and built their own craft aimed at developing nations.

But, the British Government is still "indifferent to the hovercraft," Mr. McLeavy says. This is the result of the failure of a number of sceptics in "key Ministerial positions" to recognise the hovercraft as a high dividend investment instead of an area of Government spending.

Member nations of the North Atlantic Treaty Organisation in Europe have a greater need than ever for versatile amphibious vehicles, he says. Existing craft are either obsolete or inadequate. But the Ministry of Defence has failed to encourage new designs.

Meanwhile the Soviet Union has developed hovercraft for

amphibious military roles, in a move which adds considerably to the mobility, flexibility and strike power of the Warsaw Pact forces in the Baltic.

The Soviet Navy unveiled last year the Ivan Rogov, its largest amphibious landing ship, designed to carry three Gus assault hovercraft. The Gus can land a fully-armed platoon on a beach at 60 miles an hour.

The Soviet Aist, the only other military hovercraft in the world now in large-scale production, carries main battle tanks over seas, bogs and rivers. The British Government, on the other hand, has no policy on military hovercraft development, Mr. McLeavy says.

## Indian exports improve

By K. K. Sharma in New Delhi

INDIA HAS reversed a trend of falling exports, according to the Commerce Ministry which reports that exports for the 10-month period April 1978-January 1979 rose by about 3 per cent over the same period the previous year.

Provisional figures put exports for the period at 44.16bn rupees (\$2.2bn). This compares with 53.74bn rupees for the whole of 1977-78, which represented a rise of 4.4 per cent over the previous year.

Until December, exports were running at about 1 per cent below the previous year, due mainly to fluctuations in rupee-dollar exchange rate, the fall in world commodity prices and the Government's policy of limiting exports of goods in short supply in India.

The improved performance—although below the target rate of 7 per cent—is mainly due to higher exports of engineering goods, gems and jewellery and leather products.

But, imports are about 23 per cent higher than in 1977-78 and, the trade deficit at the current year is estimated at well over 10bn rupees. This is not causing alarm since foreign exchange reserves currently stand at around the \$3.4bn level and are able to cope with the trade gap.

A 27-member delegation of Western European businessmen has completed a tour of India during which it met officials from some 300 Indian enterprises to examine the possibility of setting up joint ventures.

## GATT TALKS

## Inching towards agreement

BY BRIJ KHANDARIA IN GENEVA

A TOKYO ROUND package which will have an important influence on world trade has begun to take shape as intensive negotiations continue in Geneva with the aim of reaching final agreement by mid-April.

Some important points of difference remain among the industrialised countries as well as between these countries and the developing nations, making it unlikely that the details will be concluded before the end of this year.

However, participants in the negotiations think that the substantive accords needed to begin the process of approval by the U.S. Congress and by the European Community's member governments will be completed in the coming weeks.

Reactions to the package as outlined so far range from the cautious optimism of industrialised countries—who say that the world's trading system will be vastly improved if the package can be made to work—to the pessimism of several developing countries who feel that they have failed to win big enough steps towards a new international economic order better geared to their needs.

The pessimism of developing countries now derives largely from their belief that they may not be able to stem the tide of trade protectionism in industrialised countries arising from unemployment pressures due to energy supply problems.

The optimism of developed countries comes from the hope that greater transparency in the system of international trade and closer consultation will help build a fairer balance of interests, allowing poorer nations to export without crippling already ailing industrial sectors, such as textiles, shoes and steel, in the

developed countries, while ensuring steady supplies of primary raw materials.

The main new features of the Tokyo Round are highlighted by a series of codes of conduct concerning the use of non-tariff barriers to trade, including resort to export sub-

suppliers by government or other public purchasing entities. It would also require more transparency of laws, regulations and procedures concerning government-financed purchases.

The customs valuation code is designed to obtain a "fair, uniform and neutral system for the

tainty remaining about its immediate inclusion in the package.

A separate set of agreements will lay down the industrial tariff cuts to be offered to one another by the Tokyo Round participants in step-by-step reductions over an eight-year period.

Agricultural trade has been treated as a separate sector on insistence of the Common Market and includes accords on a framework for future co-operation as well as on cereals, dairy products and beef.

Trade in agricultural products would also be affected by the codes on subsidies and countervailing duties, technical barriers to trade, and safeguards.

The entire Tokyo Round trade package will be brought together in a final act yet to be drafted. This will probably state the Round's overall objectives and commit signatory nations to examine and, if they wish, adhere to the various separate agreements concerning industrial tariff cuts and non-tariff barriers to trade and agricultural trade.

This final act, which would declare the signatory governments' willingness to join a new General Agreement on Tariffs and Trade (GATT), should be ready for signature by mid-April, and would govern international trade relations for the next 10 to 15 years. But negotiations on the actual articles of the individual accords and codes are likely to continue well into this year.

The final ratification procedure by participating governments is expected to begin only after it becomes clear that the package is likely to be approved by the U.S. Congress and Common Market governments. Under the most optimistic scenario the new GATT would come into force in 1980.

MR. WILHELM Haferkamp, the vice-president of the EEC, has expressed concern over the need for immediate and visible action by Japan on lowering barriers to im-

ports from the EEC, Richard C. Hanson writes from Tokyo. In three days of talks in Tokyo with Japanese leaders, Mr. Haferkamp did not win any such concessions.

sidies and compensatory import duties.

For example, the code on technical barriers to trade is designed to prevent the creation of unnecessary obstacles such as standards and quality norms that would hinder imports. It would encourage the use of international standards and offer developing nations the possibility of obtaining exemptions from its provisions.

The Government procurement code is aimed particularly at eliminating discrimination between domestic and foreign

valuation of goods for customs purposes that precludes the use of arbitrary or fictitious customs values.

The aims of the agreement on import licensing procedures are to simplify such procedures and to make them more open so that they do not act as barriers to foreign exporters.

A major code on the use of safeguard measures to protect home industries against disruption from cheaper imports, mainly from developing countries, is still bogged down in dispute, and some un-

## U.S.-China accord on oil search

BY KEVIN DONE, ENERGY CORRESPONDENT

ATLANTIC RICHFIELD, Arco the U.S. oil company, has signed an agreement with China to carry out a preliminary exploration programme for oil and gas on the Chinese Continental Shelf.

Arco is the second western oil company to be granted rights to carry out a seismic survey of part of China's offshore oil prospects. Last month British Petro-

leum signed a preliminary agreement to begin offshore exploration in the south of the Yellow Sea.

Arco has released no details of the agreement.

It has been joined in the venture by Santa Fe International, the U.S. drilling company. The agreement was signed for China by Mr. Chang Wen-Pin.

## Soviet energy boost

BY DAVID SATTER IN MOSCOW

THE SOVIET UNION last year sharply cut its trade deficit with West Germany, its principal western trading partner, as Soviet exports rose almost 20 per cent on the strength of increased deliveries of oil products and natural gas.

Figures released by the West German embassy show that West German imports from the Soviet Union in 1978 had a value of M 5.4bn (£1.4bn) a 19 per cent increase over the value of Soviet exports in 1977 which was M 4.5 bn.

The increase was almost wholly accounted for by the 37 per cent rise in the value of Soviet deliveries of fuel oil, lubricating oil and natural gas. At the same time, the value of West German exports to the

Soviet Union fell 2.3 per cent to DM 6.3bn in 1978 from DM 6.45bn in 1977. This was the second year in a row that West German exports to the Soviet Union showed a slight decline.

Businessmen in West Germany foresee little improvement this year in exports to the Soviet Union of such large items as machinery and industrial equipment because of a lack of large orders last year.

Soviet deliveries of raw materials, however, should increase. The Soviets delivered some 6bn cubic metres of natural gas to West Germany in 1978, and this is expected to increase to 7bn cubic metres this year and to between 9.5bn and 10bn cubic metres in 1980.

## Andes Pact engine deal

BY KIM RUAD IN CARACAS

THE RIVALRY between Ford and Renault for the manufacture of a six-cylinder engine in Venezuela and Bolivia under the Andes Pact automotive programme is ticking away again, with a final decision expected in about 90 days, according to Venezuelan Development Ministry officials.

The two companies simultaneously presented new tenders this week in Caracas and La Paz, manufacture 180,000 engines early—105,000 in Venezuela and the rest in Bolivia. It was the second round of bidding since last year when General Motors was assigned the first of six-cylinder engines called for in the regional pact which also includes Colombia, Ecuador and Peru.

The bidding became controversial last July when Venezuela announced that General Motors and Renault had won the two thirds, but then reversed the decision. Finally, in October, GM was awarded the first engine and a new round of bidding opened for the second.

In February, Venezuela and

Bolivia issued stringent new requirements for the second round of bidding. These included demands that the winner export 60,000 units outside the five-nation economic bloc and provide technology free of charge as well as other advantages. Many of the demands reflected incentives that General Motors had included in its successful bid for the first engine.

Industry observers say that Renault holds an advantage over Ford in the bidding since it has an all-aluminium engine which has performed successfully in European markets since 1975. Ford's engine is still on the drawing boards, and, while it appears to be more versatile than Renault's, it will not enter the market until 1981.

Ford, however, has strong leverage because of its size as the major automobile maker in Venezuela with around 40 per cent of the over 182,000 units produced here last year. Moreover, many Venezuelan technicians view U.S. technology as better suited to local requirements.

## UK clothing sales drive

BY MAURICE SAMUELSON

BRITAIN'S CLOTHING industry earned £725m in exports last year and is confident of achieving £1bn by the end of 1980, Mr. Hans Jacoby, chairman of the Clothing Export Council, said yesterday.

Speaking on the eve of next week's London fashion week, he said the industry was "alive and kicking."

If the UK economy permitted, manufacturers would have a bullish future for the next 10 years, with clothing exports reaching 20-25 per cent of domestic production, or 6-10 per cent over the present export ratio.

To achieve these targets, they would have to achieve deeper penetration not only of the EEC and EFTA markets, but also of the U.S., Japan and third world countries, especially in Latin America.

ing the popularity of British textiles and designs, the level of the pound, and competitive wages and prices.

In addition, whatever the faults of the Multi Fibre Agreement regulating the international textile market, it had given the UK industry protection at home against unfair competition, enabling it to plan and invest more confidently.

### Boeing 757 go-ahead

Full production will now start on the new Boeing 757 aircraft, the Seattle aircraft manufacturer announced following Eastern Airlines' formal signing of a contract last week to buy 21 of the jets. David Buchanan writes. The 757 will be powered by Rolls Royce engines, which are an advanced version of the RB-211 engines already used on the Lockheed L-1011 aircraft.

# HOW STABLE IS THE BRITISH BUSINESSMAN?



A bad case of video 'jitters'.

Judging by some video cassette presentations, you'd think the British businessman has a bad case of the 'jitters'.

The video picture is often blurred and unstable.

Not with Panasonic's 3/4" U-Vision video cassette system. With its unique Direct-Drive motor you get a stable, clear and precise picture with remarkably reduced 'jitter'.

The U-Vision video system represents the latest in 3/4" high performance technology and will set the standard for years to come.

It offers you a wide range of features that are incredibly easy to operate.

For example, there is a 'jam-proof' gear tape loading system that lowers and threads the tape quietly and automatically.

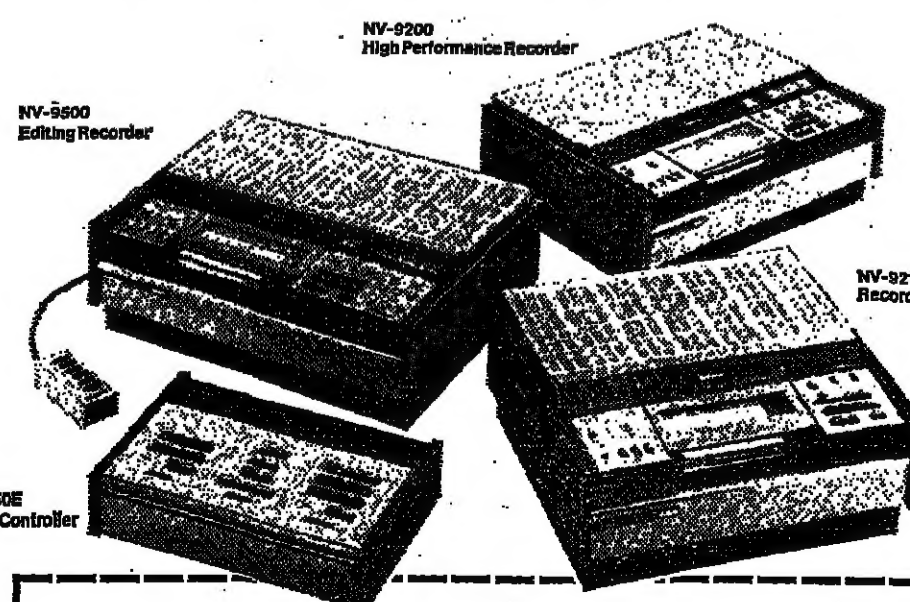
The NV 9210 and NV 9500 PAL/SECAM models have a still frame playback facility, ideal for detailed analysis in the demonstration of a new product or process.

The NV 9200 allows for playback of all three major international video standards.



U-Vision projects a more stable image.

Many companies today are talking to Panasonic about their video needs. And as a result more people will get a beautiful, stable picture of the British businessman.



To: National Panasonic (UK) Ltd., Sales Promotion Department, 107-109 Whiteby Rd., Slough, Berks. Tel. Slough 27516. Please send me details about the Panasonic U-Vision Cassette system.

Name \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_  
Tel. No. \_\_\_\_\_

**Panasonic**  
Video Systems.



# RTZ may join in Wheal Jane rescue

BY PAUL CHEESBRIGHT

RIO TINTO-ZINC, the biggest London mining house, is considering participation in Mr. Robert L. Sprinkel's scheme to rescue the failed Wheal Jane tin mine, near Truro in Cornwall.

Mr. Sprinkel's company, Carnon Tin Consolidated, has been trying to put together a deal to bring Wheal Jane back to production since last October. The mine, owned by Consolidated Gold Fields, stopped operating last May with the loss of more than 400 jobs.

RTZ had been having talks with Mr. Sprinkel, but no conclusion had been reached, the company said yesterday.

Mr. Sprinkel has come under some pressure from the Industry Department to advance his plans for private sector involvement in the Wheal Jane rescue plans. "We have been pressing the parties to come to a conclusion," the department said.

Mr. Sprinkel said: "Because of the Government's requirement to get a statement of our position by the end of the week, we are hopeful that the present discussions with RTZ can be realised in at least the form of an agreement in principle by Friday."

Mr. Sprinkel, whose background is in investment banking, is an American entrepreneur who now lives in Derbyshire. Last year he was approached by mining executives concerned about the likely demise of Wheal Jane to see whether he would be interested in re-opening the mine.

The technical advice he received led him to think that Gold Fields had failed to make the mine profitable because it used the wrong management techniques. This conclusion led him to establish Carnon Tin as the vehicle for a rescue attempt, a move welcomed by the Government because other companies, which had previously shown interest, had fallen by the wayside.

The Government has not imposed any deadline for the conclusion of Mr. Sprinkel's discussions with RTZ, but it has become increasingly concerned about the costs of pumping at the mine, which it has been paying for on a month-by-month basis.

Wheal Jane and an adjacent closed mine would flood without the pumping, which so far has cost the Government more than £800,000. Although the Government would not cut off the pumping at a moment's notice, it does not want to go on paying indefinitely.

It is clear that the Government is prepared to support a rescue of Wheal Jane, even up to meeting half the costs of Mr. Sprinkel's £8m plan. But it has been anxious, at least since the beginning of the year, to see that Mr. Sprinkel's unaided management team has the financial and technical backing of established mining houses.

Since January, Mr. Sprinkel has talked with several mining houses and last month agreed in principle with Engelhard Minerals and Chemicals of New York for a loan of £1m. What will happen to this agreement should RTZ translate its present interest into public commitment is not clear.

The history of RTZ suggests that it would not be content to be a sleeping partner in any Wheal Jane venture and that a future involvement would be accompanied by a searching and cautious appraisal of the tin resources at the mine.

This, in turn, would tend to rule out a rapid underground development programme and a quick return to production by the end of the year, as Mr. Sprinkel had once intended.

RTZ does have a specific interest in seeing production resumed at Wheal Jane. For the mine could supply feedstock for its Copper Pass smelter on Humberside, which has for years been treating Cornish tin mines' output.

The possibility of RTZ involvement gives Mr. Sprinkel his best chance yet for putting together a rescue deal, because it could act as a catalyst for further private sector support and trigger the Government's readiness to provide aid or loans.

Bank tax case appeal by Revenue

THE INLAND REVENUE is to appeal against the recent decision by the general tax commissioners in the Marine Midland Bank tax case. The outcome of the appeal will affect numerous other banks in the City of London.

The appeal is the latest stage in a saga which has dragged on for a number of years, creating considerable uncertainty in the City's banking community.

The issue is over whether Marine Midland should have to pay Corporation Tax on the sterling gains arising from non-sterling assets financed through foreign currency subordinated loan stock—without any relief for the corresponding sterling losses on the bank borrowings.

Marine Midland won the first round in the case before the City of London General Tax Commissioners early this year. The case will now go to the High Court, and some bankers predict it will eventually end up in the House of Lords.

The London-based consortiums are among the main banks affected by the outcome, since many of them have been financed by dollar subordinated loan stock.

In precise terms, the Inland Revenue has demanded that the general commissioners state a case (a form of appeal) for the opinion of the High Court. This is the procedure under Section 56 (2) of the Taxes Management Act, 1970 where one of the parties to a tax case is dissatisfied with the decision of the commissioners, believing it to be erroneous in a point of law.

Giro seeks clearing house status

NATIONAL GIRO, the Post Office-owned bank, is negotiating to become a member of the Bankers' Clearing House, the UK cheque clearing system, which is effectively controlled by the large London banks.

Membership of the clearing system is now limited to the four major London clearing banks, the Co-operative Bank, Citicorp and Co., Williams and Glyn's, the Central Trustee Savings Bank and the Bank of England.

The Co-operative Bank and the Central Trustee Savings Bank were admitted only two years ago, each on payment of a fee of £200,000. Access to the system is available to all other banks through agency arrangements with one of the clearing banks.

Membership of the clearing house is therefore more a question of economics and prestige. Commenting on the current discussions the Giro said yesterday its banking activities had now reached a level where it would appear sensible to enter clearing on a functional basis rather than share-owning. Shares in the clearing house are owned by the London clearing banks.

£18.5m EEC grant to Ulster

A FURTHER £18.5m is to be allocated to Ulster by the European Social Fund to help finance the province's industrial training schemes.

The aid, earmarked by the fund's advisory committee, will boost Ulster's total allocation since 1973 to more than £71m, and will mean that the province has benefited more per head of population than any other EEC region.

## Imported coke vital, says British Steel

BY ROY HODSON

THE British Steel Corporation fears that its strategy for competitive steelmaking in the 1980s would be threatened if the Government vetoed plans to import special coking coal. The issue is likely to be raised at a Cabinet meeting today.

Political pressure has been put on the Government by the coal mining lobby to force British Steel to cancel contracts recently signed with Australian coal companies. They involve a total of 500,000 tonnes a year of high quality coking coal, delivered to Teesside. The cost will be about £14m a year.

British Steel claimed last night that it will not be able to operate its new £400m blast furnace complex on Teesside properly unless it is allowed to import the coke.

The 10,000-tonnes-a-day furnace—twice as big as any previously built in Britain—will be lit in July. It will enable British Steel to make cheaper iron and steel than ever before, and the corporation plans to supply a number of its steel-finishing plants, including Corby, from Teesside.

The blast furnace will need a carefully selected blend of coke to withstand the pressures inside.

A joint working party between the National Coal Board and British Steel failed to agree on how the proper blend of coking coal for the furnace should be provided. The Coal Board wanted to sell mixtures of British-mined coals. But British Steel decided it must import to get exactly what it needed.

British Steel has signed two contracts with the Australians. One is for 300,000 tonnes a year of medium volatile coking coal until 1981. The second is for 250,000 tonnes a year for nine years. In each case the price is understood to be under £30 a tonne—£10 a tonne cheaper than Coal Board coal.

British Steel is stressing, however, that its import decision was taken entirely on technical grounds.

A scientific study concluded that the ideal mixture for maximum yield from the new blast furnace would be 25 per cent British coal and 75 per cent imported. But British Steel has decided to use a somewhat less efficient mixture of 45 per cent British coal and 55 per cent imported.

On the other hand, as Mr. Alan Williams, the Minister of State for Industry, responsible for the co-operative has pointed out, the total aid of £5.7m is considerably less than the £9m it might have cost the Government to keep the 720 in unemployment and social security benefits if they had lost their jobs at the end of 1974.

During its life the co-operative has made losses which now total over £4m. Recently they have been running at £16,000 a week. It has outstanding debts (held by the parent company) which went into liquidation on Tuesday) totalling about £1.7m. These include £600,000 on overdraft with the National Westminster. A further £800,000 is owed to the British Steel Corporation, which is no longer delivering the steel needed for the co-operative's main business of making central heating radiators.

The Inland Revenue and

Too many ingredients missing for success

THE CLOSURE this week of the Kirby Manufacturing and Engineering workers' co-operative on Merseyside is the latest in a series of disasters to befall the three co-operatives set up during Mr. Anthony Wedgwood Benn's period as Secretary for Industry.

One of the businesses—the Scottish Daily News—folded within a few months. The third—the Meriden motorcycle co-operative—has suffered constant financial and managerial setbacks.

The problems at both KME (as it is now called) and at Meriden have stemmed primarily from the fact that they were both created out of industrial failures. Consequently they have never been able to shake off politically-orientated, anti-capitalist and anti-management attitudes. They have also never had either enough capital or management expertise to pull their product designs and management out of the ruts they were left in by their previous owners.

Infighting

At KME in particular the co-operative's leaders have been jostling to take tough decisions, especially about redundancies. In some ways this is not surprising because the two conveners, Mr. Jack Spriggs and Mr. Dick Jenkins—won their positions on their past ability as shop stewards to save jobs when former owners wanted to sack workers.

In addition, the controversy surrounding Mr. Benn's backing of the co-operatives has meant that the fortunes of KME have been governed more by the results of Labour Party political infighting than by normal commercial criteria.

These political overtones have often hampered KME and helped to scare potential bidders away from getting involved during the past year.

Since it was set up KME has received Government financial aid totalling £5.7m. Of this, £3.9m was handed over four

## Rodgers rules out 700-mile rail cuts on network

BY IAN HARGREAVES, TRANSPORT CORRESPONDENT

MR. WILLIAM RODGERS, the Transport Secretary, yesterday ruled out the possibility of cutting 700 miles from the railway network, gave a rebuff to the idea of a September fares increase and told British Rail it could spend £56m on London commuter trains.

It was a package designed to defuse hostile questions from pro-rail MPs, who were responding to the disclosure this week that British Rail has asked the Minister to look at plans to swap trains for buses on various non Inter-City routes.

Mr. Rodgers said there was no question of British Rail being allowed to proceed with "a mini Beeching" and Mr. Norman Fowler, Shadow Transport spokesman, agreed there was no justification for another round of big cuts.

Mr. Rodgers said he had received no proposals on fares from British Rail for a September increase, which has for years been treating Cornish tin mines' output.

The possibility of RTZ involvement gives Mr. Sprinkel his best chance yet for putting together a rescue deal, because it could act as a catalyst for further private sector support and trigger the Government's readiness to provide aid or loans.

Commission rather than Mr. Rodgers.

But by resisting the railways board's demand for higher fares and, in the longer term, the opportunity to cut out loss-making services, the Government is opening itself to a renewed spate of BR demands for higher investment levels and revenue support.

Mr. Rodgers' approval for BR to spend £56m on 358 electric multiple units for Southern Region's inner suburban services completes the five-year programme for replacement of this type of train.

They will go into service on south-west London services, replacing stock more than 30 years old.

The trains, some of which are already in use on north London services out of Kings Cross, have automatic sliding doors and are designed for the possibility of one-man operation.

Mr. Rodgers said the five-year programme of building 220 units a year up to 1994 guaranteed British Rail's York engineering works a full order book for that period.

French may back British fight against EEC paper concessions

BY JOHN LLOYD

THE GOVERNMENT believes it may get French support in a bid to stop new tariff concessions made by the European Commission to U.S. paper makers. The UK paper industry believes the concessions would have a ruinous effect on profits and jobs.

## Ellerman chief takes over Thorn Electrical

By John Lloyd

MR. JACK STROWGER, managing director of Thorn Electrical Industries for the past nine years, will retire in August. He will hand over to Mr. Peter Laister, currently managing director of Ellerman Lines, the shipping company.

Mr. Strowger said he was leaving the company "in good shape" for Mr. Laister. Thorn's pre-tax profits last year were £91.1m on a turnover of £1.1bn, up from £82.9m in 1977 on a turnover of £992.9m.

Commenting on proposals to link UK electronic companies with Japanese companies—strongly urged in a recent report from the National Economic Development Council—Mr. Strowger said: "We intend to go it alone. We have the technology and it's as good as anything in the world."

Mr. Strowger, 63, joined the company in 1943. He has been chief accountant, financial director and was made managing director in January, 1970. He has been particularly concerned with the Thorn Ericsson division, and he created the various decentralised product groups in the company. He will continue as a board member and as a consultant to the company.

French may back British fight against EEC paper concessions

THE GOVERNMENT believes it may get French support in a bid to stop new tariff concessions made by the European Commission to U.S. paper makers. The UK paper industry believes the concessions would have a ruinous effect on profits and jobs.

Mr. James Callaghan, the Prime Minister said in the Commons on Tuesday that he thought the industry "had a good case," and that Mr. John Smith, the Trade Secretary, should take it up strongly.

"Our industry is in a good position to resist the U.S. proposal. The Community seems to be ready to give way on this for the sake of other concessions. I hope that we may sustain the position."

The concession, which involves a reduction from 8 per cent to 6 per cent on kraft liner—the cardboard used in the manufacture of boxes, and a major product of the paper industry—was agreed in the past month by the EEC during the final sessions of the Tokyo Round negotiations on Tariffs and Trade (GATT).

The UK industry believes the concession could mean financial losses of more than £1m a year, coupled with redundancies and mill closures.

The three main parties in the Tokyo Round are the U.S., the EEC and Japan. The U.S. demanded the 2 per cent reduction in kraft and in other paper grades in January, but it had been assumed by the UK Government and industry that the demand would be resisted.

Mr. Smith is said to be furious over the EEC's decision, and will contest it during the Council of Ministers meeting in Brussels on Tuesday.

The indications are that the French Government, under similar pressure from its industry, will support Britain and that other nations may also join in.

## Lloyd's may help Sasse syndicate pay £13m claims

BY JOHN MOORE

LLOYD'S OF LONDON may mount a rare market rescue for the stricken underwriting syndicate formerly managed by Mr. Frederick Sasse which faces losses of £13.6m.

At a 24-hour meeting yesterday the 16-strong ruling Lloyd's committee considered a number of written and verbal reports from advisers, accountants, and other Lloyd's professionals investigating the affair.

If a rescue plan emerges, the committee would have to put it before the 350 underwriting agents. Such help would only be given as a last resort. Under the rules of Lloyd's, all members are liable to the full extent of their personal wealth.

Already some of the members of the 110-strong syndicate, with average losses of £156,000, are facing bankruptcy.

But Lloyd's may be prepared to offer help because of the unusual market irregularities which occurred in the events leading up to the massive losses.

Mr. Sasse, the underwriter and manager of the syndicate, was 24 times over his premium limit during 1978, accepting £10m of business against Lloyd's limit for the syndicate of £4m.

Moreover, the syndicate's brokers, Brentall Beard, had not gained Lloyd's approval of a major producer in the U.S. of the fire insurance business for the syndicate, which led to £8m of the losses.

It was also found late last year that the syndicate's accounts had been seriously mis-stated and the City of London Police fraud squad was called in by Lloyd's.

Alfred Herbert sells grinding business after heavy losses

BY ARTHUR SMITH, MIDLANDS CORRESPONDENT

ALFRED HERBERT, the state-owned machine tool company, announced yesterday that it had sold its loss-making Churchill grinding business at Red Lane, Coventry, to B. Elliott and Co.

Many of the 200 workers at Red Lane would be offered other jobs at Peterborough, but it was not clear how many would be prepared to transfer and how many redundancies there would be. Mr. Walter Lees, managing director of Alfred Herbert, said last night.

The price for the sale had not yet been settled as stock valuations were involved. Manufacture of the Churchill grinding machines at Red Lane had incurred losses of more than £1m over the past three years. A further loss of just under £1m had been expected for the current year to December 31.

The company had suffered from the shortage of orders for big machinery, mainly because of low investment by industries such as steel. Elliott, with its extensive interests in grinding, would be able to absorb the Churchill operation profitably, Mr. Lees said.

By having off the grinding business, Alfred Herbert would make itself financially stronger. The profitable work of reconditioning used machine tools at Red Lane would continue.

Alfred Herbert is expected to announce substantial losses shortly for 1978, which saw a continued slimming-down of operations because of weak home demand.

Mr. Lees said the Edgwick site at Coventry, where the labour force has been halved to just under 1,000 in the past three years, was now "beginning to pull round." Edgwick, a large plant with heavy overheads, was identified as the company's principal loss-maker, but orders were now picking up, Mr. Lees said.

Capital Radio trading profit leaps to £3.1m

BY ARTHUR SANDLES

CAPITAL RADIO, the London commercial radio station, reports a trading profit of £3.1m for the year to last September on turnover of little more than £8m.

This leap in profits, from £1.7m in the previous year, has led to a doubling of the station's secondary rental to the Independent Broadcasting Authority—intended to cream-off high profits—to £12m.

Although Capital is the most profitable of all the local commercial radio stations its figures are probably typical of what was a remarkable year for all stations. Three years ago, there was still talk of some being in financial difficulties—though Capital was not one of them.

In his annual report Sir Richard Attenborough, Capital chairman, says the station has a regular audience of 5m.

During the year, an interim dividend of £250,000 was paid and a final dividend of £250,000 was recommended, leaving a balance of £491,000 for reserves.

Still life fetches £90,000 in auction of Old Masters

BY ANTHONY THORNCROFT

A STILL life of fruit and shells by Barthasar van der Ast made the top price of £90,000 in Sotheby's major spring auction of Old Master paintings, which totalled £1,165,000, with 14.1 per cent in the anonymous buyer will have to pay an additional 10.8 per cent on the hammer price as premium.

London dealers were active. Baxley bought a wooded river landscape scene by Salomon van Ruysdael for £70,000, double the forecast, and Agnew acquired a Goya portrait of the Infante Don Luis de Borbon and the architect Don Ventura Rodriguez for £60,000. Newman paid £50,000 for "Christ driving the traders from the Temple," of the Northern French School of around 1470.

A portrait of the painter Panini by Charles Andre van Loo realised £48,000 and Agnew, again, bought "Ornamental birds in a park" by Melchior de Hondeloot for £45,000. "A Landscape with Falcons" by David Teniers the Younger sold for £35,000 and "An Architectural caprice" by Guardi for £22,000. The newly discovered Boucher portrait was within target at £22,000.

The afternoon session added £225,950, with highest prices of £17,000 for a still life by A. Boschart the Younger (three times forecast) and £14,000 for "A still life of fruit" by Theodore van Aenwaenck.

Sotheby's Belgrave auction of continental furniture brought in £187,050. A kingwood and "Sevres" centre table signed

Leber, of the 1870's, sold for £8,000 and a French ormolu mounted kingwood commode for £6,000. The same sun secured a Pierre Jules Mene bronze group of a horse and jockey of around 1863.

There was an exceptional price of £68,500 paid at Phillips' yesterday by Eskenazi, the

London dealer, for an early 18th century Ming wine jar 12 ins high, Japanese dealers were the keen under-bidders. A Ryoshi-Bako lacquer box made £48,000 and a group of three eagles on a lacquered stand sold to Nash, another London dealer, for £4,300. The sale totalled £1,165,464.

At Phillips', Marylebone, an electrically operated model of a fairground went for £2,800 and a model of the Great Western Railway Dean single locomotive for £4,000.

Christie's top price was £14,000 for a rectangular diamond single stone ring. A diamond ribbon loop brooch with a diamond collet centre sold for £13,000. In an auction of drawings, a black chalk study by Pietro da Cortona for the head of the Angel for a fresco in the vault of the Sacristy of the Chiesa Nuova in Rome went for £7,000.



Mr. Jack Spriggs, director of KME (left), with Mr. Alan Williams, Minister of State for Industry.

Customs and Excise are together owed about £400,000 and another £100,000 is due in rates to the local council. There is also some rent outstanding to International Property Development, whose former subsidiary, IPD Industrial, was the last conventional owner of the factory before the co-operative was set up.

Matters started to come to a head about a year ago and a report by PA Management Consultants said that £2.9m was needed to put the factory on a firm footing. Subsequent estimates have ranged up to £6m. But the Government refused to provide the money and the co-operative failed to carry out other recommendations, such as the appointment of a chief executive on perhaps £15,000 a year, the introduction of a bonus scheme, and the adoption of improved marketing and production techniques.

It also failed to increase its prices sufficiently. But it did close two specially unprofitable product lines manufacturing fruit juices, and night storage heaters, although it then failed to shed the 200 workers who were consequently surplus.

Wages for the 200 roughly account for the current loss rate of £16,000 a week.

Alternative owners were then sought in the central heating business. This was because KME's main commercial significance has been that its Toprad central heating radiators have held 10 per cent of the UK market and have helped to stem the tide of imports at a time when demand for radiators has been rising.

This led Steirad, part of Metal Box, to become involved last summer. It considered taking over the business with Government help and would then have set up a new modern radiator factory near the co-operative's site. But that deal fell through, as did a possible later take-over by Worcester Engineering, a central heating boiler manufacturer which might have received technical help from Steirad in return for Steirad taking a 20 per cent stake in its equity.

Since then the Government has turned down a further £6m aid application from the co-operative itself (£2m to clear immediate financial problems and to buy the factory plus £4m for development of the co-operative's outdated production lines), and the Prime Minister said in the Commons last month that the best course for the

هكذا ان العمل



# UK word processors 'lagging behind'

BY JOHN LLOYD

THE National Enterprise Board should encourage a foreign-owned multinational to establish a plant in the UK to manufacture word processors—electronic typewriters combined with computers—to compete with British companies.

This is one of the recommendations of a report by the office machinery sector working party of the National Economic Development Council, published today.

The report says that the UK office machinery industry continues to deteriorate relative to its major competitors, and that "manufacturers have, with a few notable exceptions, not so far successfully switched to electronic-based product lines where the market growth is fastest."

In another report from the NEDC published today the automation and instrumentation

sector working party also stresses that moves from lower to higher technology products must be continued, and quickened, though it notes that the industry is relatively well placed, with a positive trade balance in 1977 of £233m.

In contrast, the trade balance in office machinery shows a deficit of £190m in 1977, up from £163m in 1976 and £49m in 1975.

The office equipment report says that future success in the office machinery market is "inextricably bound up" with the future of UK electronics components and computer manufacturers, because of the progressive incorporation of electronics into office machinery.

"That trend makes all the more disturbing the trade deficit of nearly £200m in 1977 for the more broadly defined

category of office equipment that takes in computers and computer peripherals."

The report is a sombre one for the three major product groups studied—photocopying equipment; cash registers, facsimile transmission microfilm and mailroom equipment; and automated office products.

The report says that the three new products launched by the copier industry in 1978 were all at the "high" end of the market. "The UK sector's position remains vulnerable to continued heavy imports at the 'low end' of the market."

The report says that the U.S. and Japan have already established massive strengths in cash registers and associated equipment. Marketing operations overseas are essential to generate higher volume and encourage investment, and this

should be with the assistance of the Government.

On automated office products, the report notes that only 5 per cent of word processors now in use in the UK were manufactured in Britain. The Government should become closely involved in the sector, both by encouraging a large multinational plant through the NEB, and also act as "a catalyst for change and development, working closely with industry to specify needs and, as appropriate, application areas and possible markets."

The report on automation and instrumentation is more buoyant, though it says that there is a shortage of skilled labour amounting at times to 30 per cent of requirement, and that, in many products, world market opportunities have not been taken up.

Multinational activity in this sector is very high—foreign ownership is as high as 65 per cent in some sectors—but where UK companies are not linked to multinationals, they are at a competitive disadvantage.

"If the UK industry generally is slow in adopting new micro-electronic applications, the automation and instrumentation sector will lack a firm home market base for new products, with the result that it could miss out on new export opportunities and subsequently be overtaken even in the home market by more advanced products developed by overseas competitors for their own home markets."

Reports of the Office Machinery and Automation and Instrumentation sector working parties: National Economic Development Office, Millbank Tower, Millbank, London SW1P 4QX.

## Army of diggers cry for a patch of soil

By Christopher Parkes

EVEN THOUGH the price of fresh vegetables has tumbled the excessive levels of the drought-stricken 1975 and 1976 growing seasons, Britons are still clamouring for a chance to get their spades into a little patch of land they can call their own.

The conservationist group Friends of the Earth claims that there are still more than 120,000 people on waiting lists for local council allotments. At the same time the group estimates there are some 220,000 acres of derelict and despoiled land lying idle in Britain and a further 55,000 acres unused in Scotland and Wales.

In an attempt to bring some of this land into production FoE has just published an "allotments campaign guide" for individuals and groups interested in persuading the owners of these waste acres to allow them to be salvaged by volunteer armies of diggers and hoers.

The group also has called for a government survey of all waste land, and they want local authorities to be empowered to licence temporary allotments on any land lying idle for five years or more.

The Manpower Services Commission should be instructed to start land reclamation and authorities should be ordered to clear their allotment waiting lists by reclaiming waste acres and handing them over to the public, the group says.

Even though vegetable prices have come down from recent peaks, national spending on fruit and vegetables is still £1.45bn more than it was seven years ago, the group says, and a family allotment could cut shopping bills for fresh produce by as much as £130 a year.

## Lucas review wins award

LUCAS INDUSTRIES' 1978 annual review has won the major companies' section of the annual employee reports competition organised by Accountancy Age magazine and the Industrial Society.

The Mobile Training Cup was presented to Mr. James Shield, director and treasurer of Lucas Industries, in London.

## RESTRICTIVE PRACTICES

# Reviewers urge stronger, more flexible law

BY PAUL TAYLOR

THE TREAD running through the recommendations in the Government's Green Paper on restrictive trade practices policy, published yesterday, is that existing competition law should be strengthened but made more selective and flexible.

The review body, comprising senior civil servants and economists from government departments, which prepared the Green Paper, says that existing legislation has proved effective in removing restrictive agreements in relation to goods and has contributed to improved industrial efficiency.

However, it argues that there are some grounds for criticism: in particular, the legislation is too inflexible and so may deter or prevent both "insignificant and significant but desirable" agreements. The major thrust of the Paper is that flexibility should be increased, mainly by broadening the discretionary powers of the Director General of Fair Trading; that the means of enforcement should be strengthened by the introduction of discretionary fines for failure to register agreements and by making collusive tendering a criminal offence.

The review body rejects the idea of a fundamental change in the approach to restrictive trade practices to bring UK legislation more in line with that in the European Community.

To change the basis from specific restrictions to the "effects-based" system—a general system based on the control of arrangements and agreements which have the effect of restricting competition—would "result in upheaval and cost to industry" and it was unlikely that the benefits would outweigh the disadvantages.

However, a much wider role for the Monopolies and Mergers Commission is suggested to control anti-competitive practices which are not covered by present law.

The major changes in the law needed to achieve the general objectives and set out in the Green Paper are:

agreements with the director general of Fair Trading given discretion not to proceed against insignificant cases.

● Giving the director general power and discretion to approve cases without taking them before the Restrictive Practices Court. This, it is argued, would improve flexibility.

● Powers to prevent the continued operation of a undesirable agreement pending a full court hearing either by amending the existing law or by giving the director general the power to make orders.

● The introduction of discretionary fines for failure to register registrable agreements.

● Giving the director general power to refer certain non-registrable agreements, arrangements and practices adversely affecting competition to the Monopolies and Mergers Commission for full investigation or to accept an undertaking from those involved that they will stop the practice, even where no statutory monopoly exists.

● Giving the Secretary of State for Prices and Consumer Protection back the power to act on a Commission report.

## Criminality

● The introduction of a ban on defined agreements which have been found to be against the public interest, for example, collusive agreements (which the reviewers recommend should be made illegal) and the power to prohibit other forms of agreements.

The Green Paper says these measures would give "more coherent" controls and adds that the relationship between the Office of Fair Trading, the Monopolies and Mergers Commission and the Price Commission also will have to be examined.

On the controversial question of making some infringements criminal offences, the Paper says that because of the "growing evidence" of evasion relating to collusive tendering, and because of the fraudulent nature of the practice, criminal charges should lie.

## Bid to delay Coal Board Belvoir plan inquiry

BY JOHN LLOYD

OBJECTORS to the National Coal Board's plans to develop a 10m tonnes a year mining complex in the Vale of Belvoir in north-east Leicestershire want the inquiry into the project put off for at least a year. The preliminary stage of the inquiry, which will set the agenda for the main proceedings later this year, begins on May 8.

The alliance of anti-Belvoir groups, made up of the National Farmers Union, the Vale of Belvoir Protection Group and the Vale of Belvoir Parish Councils Committee, say that the inquiry should wait until the Commission on Energy and

the Environment, chaired by Lord Flowers, has reported in about two years time.

In a letter to Mr. Peter Shore, the Environment Secretary, they say that the inquiry decision would have to be made before the Coal Board case could be tested against the wider criteria laid down by the commission and might well conflict with them.

"Surely it is a matter almost of common sense not to proceed with this inquiry at this juncture, but for those most closely concerned to direct their energies to ensuring that the commission is properly informed on all relevant matters without delay," says the letter.

## Low pay deters recruits, chairman of Bar says

LOW PAY among barristers, one-third of whom earn less than £4,000 a year, has led to a drop in recruits to the Bar, according to evidence to the Royal Commission on Legal Services by Mr. David Hirst, QC, chairman of the Bar. There was an urgent need for a big rise in fees for publicly funded criminal work, he said.

A survey among barristers, ad shown that one-quarter,

mostly the recently called, earned less than £3,100 a year.

Mr. Hirst also urged the Commission to consider that any major change in the work pattern of the legal profession, such as the suggested extension to solicitors of rights of audience in Crown Courts, might cause "a stampede from the Bar, certainly from the younger members." He had seen no public demand for such a change.

## Food group 'flouted obligations'

INTERNATIONAL STORES, the food retailing group, deliberately flouted its obligations under a lease by closing an unprofitable supermarket and leaving it empty, a High Court judge said yesterday.

The company said it was a "correct commercial decision." "If this is the standard by which they judge the correctness of their commercial decisions, I have some sympathy with the persons who find themselves doing business with them."

The judge "reluctantly declined" to grant an injunction in a pending action by Braddon Towers, a subsidiary of Allied London Properties requiring International Stores to re-open as a supermarket at Vincent Park Estate shopping centre, Sittingbourne, Kent, owned by Braddon Towers.

The judge said International Stores had committed a serious breach of covenant, without any apparent regard for Braddon Towers, or the occupants of the other shops.

He said the law did not allow the court to compel someone to carry on a business.

He gave directions, however, for an early trial of the action, in which Braddon Towers will claim damages against International Stores.

## Fire losses soar after Bolton blaze

BY ERIC SHORT

ONE FIRE, which caused £10m worth of damage was the chief reason for fire damage costs in February soaring to £33.8m, according to figures released yesterday by the British Insurance Association.

The £10m disaster occurred in mid-February at the filter manufacturing plant of Automotive Products in Bolton, Lancashire. The factory, a total write-off, was the largest single item of fire damage since the Flixborough explosion in June 1976.

February's figures were also boosted by three other £1m-plus fires, including one at Waring and Gillow's furniture store in

the centre of Reading, costing nearly £2m.

Although last month's damage costs were only £3.5m up on the previous month, they were nearly £10m above those for February last year. Fire damage costs have now exceeded the £30m mark in each month from September, with the exception of December. This level had previously only been reached during the firemen's strike period and the Flixborough disaster.

Altogether there were nine fires where damage exceeded £250,000 and a further 76 costing more than £35,000 each.

## Plant managers warned of oil tank danger

THE HEALTH and Safety Executive has started a campaign to warn factory managers of the dangers of heavy fuel oil tanks exploding. The warning follows an investigation by the executive into a series of blasts and fires.

The investigators found most of the explosions were caused by overheating and the build-up of dangerous concentrations of oil vapour within the tanks. The

main reason for this was that thermostats in the tanks were not immersed in the oil and unable to control temperatures properly.

The executive said yesterday that factory managers needed to check that tank heaters and thermostats were always immersed in oil. Extra precautions had to be taken during cold weather or when there was any likelihood of oil supplies being interrupted.

# Pan Am introduces 3 new ways to fly the world.

Some of the people we fly each day can afford the best service in the world. Some simply want good service for the best prices in the world.

So, for our First Class passengers flying on our long-range 747SPs, we're offering a brand-new idea in de luxe service. Unique reclining Sleeperette® seats and private table-for-two dining with excellent international cuisine. As from April 29th, this service is available on our daily Heathrow to Los Angeles flight. Of course, our celebrated upstairs dining room remains a Pan Am exclusive on all our transatlantic 747 routes.

For the business traveller and others paying full fare, most of our 747 world-wide flights offer Clipper Class®, a separate section with free drinks and headsets. Plus a lot more attention on the ground and in the air.

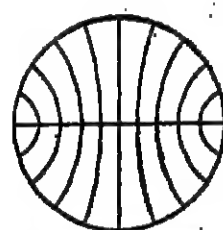
For people taking advantage of our special fares, we have Full Service Economy Class offering the same high standard of service Pan Am Economy passengers have always enjoyed.

Three great new ways to fly. To bring them to you, Pan Am has the world's largest fleet of 747s and 747SPs—the most advanced planes in the skies. Every one offering the kind of specialized service that can make all the difference on a long-distance flight.

See your Travel Agent. And choose the way you want to fly the world. On Pan Am.



We fly the world the way the world wants to fly.



PAN AM



UK NEWS

CAMBRIDGE ECONOMIC POLICY REVIEW

BY PETER RIDDELL

'Incomes policy offers no answer'

THE SYSTEM OF world trade no longer induces adequate economic growth and major structural changes are needed - this is the central conclusion of the Cambridge Economic Policy Review published today.

The review is the annual study produced by a team of researchers at the Department of Applied Economics at Cambridge, headed by Mr. Wynne Godley and commonly known as the New Cambridge school of economists, as distinct from an older generation associated with the Keynesian analysis.

They present a very pessimistic analysis of Britain's economic prospects in the 1980s, with the prospect of unemployment possibly up to between 24m and 34m, unless policies are changed. Incomes policy, fiscal and monetary restriction and devaluation will not provide an answer - only general import controls and reflation to expand internal demand offer a solution.

This year's review concludes that "the existing framework of international economic relations, the rules by which it operates and the theories on which those rules are based, now serve to entrench unemployment and inflation in many countries, including the U.S. and the U.K."

"The assessment confirms the persistence of long-run trends in the structure of trade in manufactured goods, in particular the growing Japanese share in contrast to the falling shares of the U.S. and the U.K."

"Two widely feared eventualities - higher oil prices and retaliation against U.S. or UK import controls - would not be particularly harmful to world trade. The real danger now is that the U.S. may decide to eliminate its deficit while Japan's share of world exports continues to grow and EEC countries debate to avoid having the U.S. deficit passed on to them. This combination of circumstances would rapidly deepen the world recession."

The result would be that the EEC and most other developed countries would then manage growth of only 2 to 3 per cent a year and the U.S. would manage very little growth at all.

Imbalances

These assumptions are not particularly sensitive to assumptions about oil prices since there is every reason to suppose that OPEC imports will again rise to match OPEC revenues if there are further substantial oil price increases.

The conclusion is that unless action is taken, either Gross National Product growth in many countries, including the U.S., must be restrained well below the rate compatible with full employment, or the current accounts of major countries and blocs must move further and further out of balance.

The study makes the following main points:

- The required changes in structural trends in the 1980s are larger than can be achieved by exchange rate adjustments.
- Reduction in the growth of Japanese exports would permit faster expansion of the trade of all other countries.
- Whether or not growth of world trade accelerates, the U.S. will need to restrict growth of imports in order to achieve internal growth and full employment, and provided such restrictions are used to maintain internal growth rather than to cut the U.S. trade deficit, they will not reduce the trade of other countries.
- Countries able to maintain internal growth, either

PROSPECTS FOR BRITISH ECONOMY			
per cent annual change			
	1978-80	1980-85	1985-90
Base Projection:			
Exports	5.8	4.1	3.8
Imports	5.4	4.4	4.3
Gross Domestic Product	2.2	0.5	0.1
Unemployment in final year (thousands)	1,500	2,720	3,740
Import Controls:			
Exports	5.7	4.1	3.8
Imports	5.3	4.3	4.2
Gross Domestic Product	3.6	4.0	2.9
Unemployment in final year (thousands)	1,420	1,490	1,340
Devaluation:			
Exports	7.5	8.1	7.0
Imports	5.5	7.1	6.9
Gross Domestic Product	3.1	3.4	2.5
Unemployment in final year (thousands)	1,380	1,150	860

Assumptions about world conditions same in each case. Base projection assumes maintenance of constant cost competitiveness; import control strategy assumes restriction of imports of manufactured goods so as to achieve GDP growth shown; devaluation strategy assumes cost competitiveness reduced by 4 per cent a year up to 1985 and 2 per cent a year thereafter.

because they have strong trading positions or by means of general import controls, could then aid growth of developing countries by discriminating in their favour.

● To the extent that structural changes needed for balanced growth are not achieved, expansion of world trade will turn mainly on the size of the deficit which the U.S. is able to sustain and on the fiscal and monetary policies of stronger EEC countries.

● Fast expansion in Japan has little locomotive power for world trade because of Japan's low import propensity.

The review also argues that within the EEC trends in trade between member countries are causing problems of structural imbalances similar to those in the world system as a whole. It estimates that the redistributive effects of transfers within the EEC are arbitrary and in certain respects extremely perverse. The study confirms that the UK makes much the highest per head net contribution.

The possible effect of changes in the EEC transfer system are calculated. One alternative assumes that the UK's present net cash payment is exactly extinguished by a compensatory net annual transfer from the Community Budget to the UK Government of around £1.1bn. On this basis, output might be 14 per cent higher than at present, with consumer spending 3.3 per cent higher, unemployment 4 per cent lower and consumer price inflation 2 percentage points lower.

Moreover, according to the review, "proposals now being considered could make the problem of internal imbalance in the EEC even worse. If, for instance, the major food producing areas obtain yet higher prices for their output, this would increase the total cost to the UK and Italy and benefit some richer members. The European Monetary System would further impede growth in those EEC countries which suffer inflation because of their relatively low incomes and weak trading positions."

"The main directions of change which would

improve economic performance in the EEC are a radical alteration in the system of transfers, policies to aid convergence of industrial performance between member countries and their regions (and) reflation by governments of member countries with strong currencies."

The slow growth of world trade and the burden of EEC transfers both create problems for the U.K. But these are less important than adverse trends in UK trade in manufactured goods which have already been a decisive constraint on growth of Gross Domestic Product since the start of the 1970s.

The review contains a detailed analysis of what might happen on the basis of the current strategy. This assumes the continuous achievement of a zero basic balance on external accounts and the maintenance of the cost competitiveness of UK producers at the average 1978 level.

It is assumed that these constraints are met by adjustment of fiscal policy and of the exchange rate with no measures to correct adverse trends in trade performance. World trade is assumed to expand at the same rate as in the past three years.

From this analysis the review concludes that UK prospects will be very poor indeed in the 1980s when North Sea benefits level off.

"Even in the short-term unemployment is likely to rise and inflation to accelerate. On the implausible assumption that nothing is done, unemployment would rise to between 24m and 34m during the 1980s and inflation would be in the 15 to 20 per cent range (when not temporarily checked by incomes policies)."

Fast growth of world trade or relief from EEC transfers would help to delay the process of deterioration for two or three years, but would not reverse it.

Conclusions

A long discussion about the effects of alternative policies concludes:

- Fiscal and monetary restrictions would marginally reduce inflation in the short-term by holding up the sterling exchange rate, but would, after a few years, run into the impasse of severe stagflation, as the adverse effects of a high exchange rate on trade, GDP, unemployment and public finances make themselves felt.
- Incomes policy is a weak instrument for reducing inflation in the long-term.
- Devaluation aimed at restoring growth and stabilising unemployment would accelerate domestic inflation and require a very large fall in the sterling exchange rate.
- Import controls and fiscal expansion of internal demand in the UK would achieve faster growth and a gradual return to full employment.
- Inflation would become less serious in the longer-term if faster growth were achieved by import controls or by any means other than devaluation.
- A permanent reduction of inflation through incomes policy, even if it were possible, would not alter the prospect of slow growth and rising unemployment (except if used as a substitute for overt devaluation).

The review does "not accept that nothing should be done because corrective action is inconsistent with EEC and wider international rules. Such rules are meant to be beneficial to all countries which abide by them."

Cambridge Economic Policy Review, April 1979, number 5, price £5.00 from Gower Press, 1, Westmead, Farnborough, Hampshire GU14 7RU.

LABOUR

NUPE calls off its campaign in hospitals

BY PAULINE CLARK, LABOUR STAFF

THE National Union of Public Employees yesterday called off its campaign of industrial action over a 9 per cent pay deal for hospital ancillary workers.

The 26-strong union executive was unanimous in its decision after recognising what NUPE later described as the "impossible position" in which it had been placed by the other three unions representing hospital workers.

Earlier this week, NUPE was outvoted 12 to four in a decision by the national union side negotiating committee to accept the offer of 9 per cent and a comparability study with £1 on account.

This followed a delay of about two weeks in formal acceptance of the offer while NUPE resisted pressure from the other unions to call off selective industrial action in hospitals in pursuit of an improved deal.

The prospect of an election campaign soon almost certainly contributed to growing union pressure on the executive to call off industrial action which would have become a political embarrassment to the Government.

The union, however, remained bitter about its position yesterday. It plans to make representations to the TUC for proportional representation on major negotiating bodies in the public services.

Although it represents by far the majority of hospital ancillary workers, it has, for instance only four seats along with all the other unions on the negotiating committee - an allocation which has not changed since it was set up 30 years ago. The issue is expected to be debated at length when the union holds its annual conference in May.

It predicted yesterday continuing sporadic disruption in hospitals over the next few days because of disputes over payment for extra work in the aftermath of industrial action.

Part-time hospital workers, which make up a substantial number of NUPE members in the group, are said by the union to be disgruntled that they will not benefit from the planned comparability study.

The union is also expected to be outvoted on the ambulance men's national council today when unions vote on a similar offer to the group.

Ambulance men in South Glamorgan decided yesterday to continue their strike until Friday, when peace talks between NUPE leaders and the area's health officials are expected to be resumed. The ambulance men walked out last week when pay was withdrawn because they refused to return to normal working, and protest action has since spread to other parts of the country.

More back Civil Service strike call

By Philip Bassett, Labour Staff

CIVIL SERVICE work throughout the UK is expected to halt on Monday after the Civil Service Union and the Northern Ireland Public Service Alliance yesterday decided to join a one-day strike in protest at the Government's 7 per cent pay offer.

About 520,000 civil servants have now been called out or given authority to strike on Monday.

The CSU said that Whitehall messengers, Government establishment and museum and art gallery security staff, radio operators, telephonists, court ushers throughout England and Wales and many Coastguard officials would take action on Monday.

Messengers and security staff at the Houses of Parliament, drivers, stable lads, footmen and other staff at Buckingham Palace and Beefeaters at the Tower of London will also be called out.

Spot strikes

In company with the four other major civil service unions, the CSU will organise selective strike action to follow the one-day stoppage.

The Northern Ireland Public Service Alliance, which represents 20,000 civil servants in the province from messengers to principals, will also consider further industrial action after the one-day strike. Their pay settlement is linked to the main deal.

The Alliance said yesterday that civilian security guards at Belfast city centre gates will be withdrawn on Monday, in addition to staff at major departments and other establishments.

Most social security offices in Manchester were closed yesterday and 24 out of the 25 offices will remain strikebound until next Tuesday.

The unions are pressing the Government to honour the findings of the Pay Research Unit comparability studies, which the unions estimate show rises due averaging 23-28 per cent. The Government has offered 7 per cent now with the balance in April next year.

Dispute called over LT fraud claim

EXCESS FARES will not be collected on London's Underground on Monday by members of the National Union of Railwaysmen in protest against allegations by London Transport that ticket collectors pocket £2.5m a year.

Mr. Charles Turnock, assistant general secretary, said there was strong resentment among the 15,000 NUR members on the Underground at the allegations by a member of the Greater London Council's transport committee. He warned that the union's executive would consider a one-day strike on the Underground if the allegations were not withdrawn.

About 1,000 fare collectors with refuse to collect any excess fares, and other NUR members have been instructed not to take over their work.

Mr. Turnock blamed London Transport for the "misleading" document, containing claimed fraud figures, which was given to the Greater London Council.

Bank staff agree to 8 1/2%

SCOTTISH BANK staff, whose pay settlement sets the tone for deals in the English clearing banks, yesterday agreed pay increases with the Federation of Scottish Bank Employers worth 8 1/2 per cent.

The increases for the 23,000 staff take effect from April 1. The agreement also eliminates some minor pay anomalies.

NATSOPA accountants report with executive

BY ALAN PIKE, LABOUR CORRESPONDENT

THE National Society of Operative Printers, Graphical and Media Personnel executive will next week consider a financial report put to a special meeting of the union's governing council this week.

Members of the governing council - the NATSOPA conference - were recalled at a private meeting on Tuesday to consider the accounts' report. At its regular meeting last year the governing council refused to accept the union's balance sheet and financial statement and demanded the appointment of a fresh, independent firm of chartered accountants to prepare new accounts.

A NATSOPA head office spokesman said yesterday the governing council had considered the issue and passed it to the executive with recommendations for them to consider next week.

On the instructions of the governing council the new accountants' report, which the executive will discuss, covers a considerable range of issues.

These include details of the sale of investments and properties over the past 10 years, Swiss bank accounts, all companies set up by the union or by any officers in their own authority, and the purchase of Kruggerands, gold sovereigns or medallions.

Last night the Guardian was due to resume publication on Times Newspapers' presses, where it is normally produced, for the first time since the Times suspended publication on November 30 last year. Since then it has been produced under a temporary contract with Associated Newspapers.

Management and unions at Times Newspapers are negotiating industrial relations reforms they hope will enable publication to resume by April 17. It is stressed by both sides, however, that the return of the Guardian to Times Newspapers does not guarantee that the Times negotiations, some at a delicate stage, will succeed.

Print union admits trying 'to wreck newspaper'

A PRINT union was trying to "wreck" a provincial newspaper group into submission in a battle for recognition, a QC acknowledged in the Appeal Court in London yesterday.

But Mr. Simon Goldblatt, QC, argued that the union was keeping its eye on its target, and its blackmail of advertisers was in furtherance of a dispute with the publishers.

He was appearing for the National Graphical Association which is challenging a temporary High Court injunction ordering the lifting of blacking activities.

The injunction had been granted to national newspapers where printers refused to handle advertisements from organisations which had advertised in the Nottingham Evening Post - the newspaper at the centre of the union's recognition dispute.

"We want to stop them advertising in the Post," said Mr. Goldblatt. "If we do, it will be a valuable step forward in our fight with T. Bailey Forman (publishers of the Nottingham paper)."

The hearing continues today.

Strike threat at Chrysler

THOUSANDS of Chrysler workers will strike in two days if the company does not answer a three-point ultimatum satisfactorily. Shop stewards at the engine building factory in Coventry say they will call out the labour force on Friday, when a mass meeting will be held.

They have asked the company to declare its intention regarding 1,200 men whose jobs are threatened by the Iran crisis: to agree work-sharing as a way of saving jobs; and to give assurances that there will be no redundancies.

Britain's Automotive industry defended

By Kenneth Gooding, Industrial Correspondent

BRITAIN'S automotive industry should not be judged by the number of imported cars sold in the UK, but by the healthy balance-of-trade surplus in cars and components, said Mr. Richard Martindale, director of marketing for BSG International last night.

"I don't understand how some large British companies insist that their employees all drive British cars, and then expect to sell their products on the Continent, whether they are electric kettles, chemicals, light sockets, brass valves or whatever," he said.

The Channel is no more a fiscal barrier than the Thames. You might just as well talk about exporting cars from Coventry to Kent. Frankly, where the car is assembled is of only academic interest."

Mr. Martindale's company is not only a leading supplier of seat belts and vehicle mirrors to European car and truck makers but also Britain's major retailer of imported cars in the UK (it was formerly known as the Bristol Street Group).

Speaking at a dinner held by the Institute of British Carriage and Automobile Manufacturers at Kew Palace last night, Mr. Martindale maintained the "important question to be asked is how much of the car is British, because if you take into account the number of UK sourced components that go into foreign-assembled cars, then we are in a healthy surplus - last year there was a surplus of £800m on components alone."

Mr. James Callaghan, the Prime Minister had been wrong to exhort people to "buy British" because "nobody ever got fat eating their own tail."

He added: "The correct injunction should have been export and design for world markets. If we don't, and we adopt an insular attitude to our planning and ignore what is going on in the world then, if we are not careful, the British car industry will go the same way as our motor cycle industry, where our obsession with marketing for our own country, with insufficient regard to what was happening around the world, ruined a once great industry."

Scottish school teachers strike

THOUSANDS of Scottish children missed lessons again yesterday because of selective strike action by more than 3,000 members of the Educational Institute of Scotland which said that more than 70 primary and secondary schools had been affected.

COMPANY NOTICES

UNION CORPORATION LIMITED

(Incorporated in the Republic of South Africa)

NOTICE OF ANNUAL GENERAL MEETING

Notice is hereby given that the annual general meeting of members of Union Corporation Limited will be held in the Board Room on the ground floor of the Union Corporation Building, 74-78 Marshall Street, Johannesburg, on Wednesday, 25 April 1979, at 11.00 a.m. for the following business:

- 1) To receive and consider the annual financial statements for the year ended 31st December 1978.
- 2) To elect directors in accordance with the Corporation's articles of association.

A member entitled to attend and vote at the meeting may appoint one or more proxies to attend and vote in his stead. The proxy need not be a member of the Corporation. Forms of proxy must be received by the Secretary of the Corporation, c/o the Company Secretary, 74-78 Marshall Street, Johannesburg, at least 48 hours before the meeting. The proxy will be valid for the meeting and any adjournment thereof. The meeting may be called in or postponed by the Board of Directors. The meeting may be called in or postponed by the Board of Directors. The meeting may be called in or postponed by the Board of Directors.

By Order of the Board,  
P. HUBERT, Secretary.

CANADIAN NORTH ATLANTIC WESTBOUND FREIGHT CONFERENCE

CANADA-UNITED KINGDOM FREIGHT

NOTICE TO SHIPPERS AND CONSIGNEES

FUEL COSTS

The member lines of the above conference, operating services between the United Kingdom and Canada, have agreed to increase their freight rates from 1st April 1979. The increase will be 10% on all rates. The increase will be 10% on all rates. The increase will be 10% on all rates.

Members of the conference are invited to apply for a partial refund by submitting a form to the conference secretariat, 100, Victoria Street, London, W1B 5JL. The form can be obtained from the conference secretariat. The form can be obtained from the conference secretariat.

Residents of Italy can have a full refund by submitting a form to the conference secretariat, 100, Victoria Street, London, W1B 5JL. The form can be obtained from the conference secretariat. The form can be obtained from the conference secretariat.

In all other cases Netherlands Dividend Tax at 25% will be deducted from the gross dividend. Exemption from United Kingdom Income Tax will be granted by the usual automatic certificate, non-refundable. Exemption from United Kingdom Income Tax will be granted by the usual automatic certificate, non-refundable.

Companies will be accepted for payment of business days between the hours of 10.00 a.m. and 4.00 p.m. Listing forms may be obtained from the Company's Financial Assistant.

FOR INFORMATION ONLY

Announcement of the recommendations of the Share Share Warrants will be made in due course.

SUB-SHARE CERTIFICATE

REGISTERED IN THE NAME OF NATIONAL PROVINCIAL BANK

Claims should be lodged with National Westminster Bank Limited, 100, Victoria Street, London, W1B 5JL. Claims should be lodged with National Westminster Bank Limited, 100, Victoria Street, London, W1B 5JL.

Where non-residents require their dividend to be paid into an inland Revenue Account must be lodged with the claim.

The Record Date is 28th March 1979. The Record Date is 28th March 1979.

Exchange and Marketing Name will be made by National Provincial Bank Limited, 100, Victoria Street, London, W1B 5JL.

A further announcement will be made shortly giving full details of the dividend.

SHAREHOLDERS IN THE REPUBLIC OF IRELAND

Approved Agents in the Republic of Ireland may present claims to the Company's Financial Assistant, Allied Irish Banks Limited, Registered Office, 100, Victoria Street, London, W1B 5JL.

Claims on sub-share certificates issued in the name of the Member and Leinster Bank Nominees (Irish Bank Limited, Registered Office, 100, Victoria Street, London, W1B 5JL).

29th March 1979.

PUBLIC NOTICES

No. 0024 of 1979

In the HIGH COURT OF JUSTICE

Chancery Division Group A. In the Matter of WESTINGHOUSE BRANE AND SIGNAL COMPANY LIMITED and the Matter of THE COMPANIES ACT 1948.

NOTICE IS HEREBY GIVEN that the Order of the High Court of Justice Chancery Division dated the 19th March 1979 confirming the Reduction of the Capital of the above named Company from £12,000,000 to £1,335,584 and the Minute approved by the Court showing with respect to the Capital of the Company as altered the several particulars required by the above Statute were registered by the Registrar of Companies on the 23rd day of March, 1979. Dated this 28th day of March, 1979.

ALLEN & OVERY, Solicitors for the above-named Company.

LEGAL NOTICES

INVESTIGATION BY THE MONOPOLIES AND MERGERS COMMISSION

PROPOSED ACQUISITION BY THE GENERAL ELECTRIC COMPANY OF THE SIGNAL COMPANY LIMITED

On 14 February 1979 Mr. Roy Hattersley, Secretary of State for Prices and Consumer Protection referred to the Monopolies and Mergers Commission for investigation and report under the provisions of the Fair Trading Act 1973, the proposed acquisition by the General Electric Company of the Signal Company Limited. The Commission are required to report within 28 days of the date of referral.

Any person or organisation wishing to give evidence or make representations to the Commission should write as soon as possible to the Secretary, Monopolies and Mergers Commission, New Court, London WC2A 2JT.

TRAVEL

01 APRIL LAST MINUTE VACANCIES

Shut Italy 239, Geneva Flight 239, Zurich Flight 240. For full details of sailing vacancies and times of flight enquiries call 01-361 2191. CPT LIMITED, Tel: 919078. Access and Barclaycard Welcome.

ART GALLERIES

SANFORD GALLERY, Covent Garden, 1, Bedford Square, London, WC1R 4EJ. Temporary Exhibitions, Landscapes, Paintings, Sculpture, Books, Prints, Photographs, Drawings, Maps, etc. Tel: 773 9905.

CLASSIFIED ADVERTISEMENT RATES

Commercial & Industrial Property 5.30 18.00, Residential Property 2.30 9.50, Applications 5.30 18.00, Opportunities, Corporation Loans, Production Capacity, Business for Sale/Wanted 6.25 18.00, Education, Motors, Contracts & Tenders, Personal, Gardening 5.00 15.00, Hotels and Travel 3.00 12.00, Book Publishers - 6.00. Premium positions available (minimum size 40 columns cm) at £1.50 per single column cm, extra.

For further details write to: Classified Advertisement Manager, Financial Times, 10 Cannon Street, EC4A 3DF.

EDUCATIONAL

German, French, Italian, English

\* Intensive individual tuition \*

\* Semi-private tuition (up to 6 per group) \*

On your own Company premises or in one of our centres

Also In Company Group Training: A complete language service by one of Europe's largest and most experienced language training organisations.

Ring: 01-848 2677

HOLBORN LANGUAGE CENTRE

Management House, 43, Parker Street, London WC2

CLUBS

129, Regent Street, 734 0557. A. J. GARDNER, 89, Dean Street, London, W1. Music or All-Music Spectacular. Floor Show 10.45, 12.45 and 1.45 and 2.00. Mon-Fri, Closed Saturdays 01-437 8455.



# Technical Page

EDITED BY ARTHUR BENNETT AND TED SCHOETERS

## METALWORKING

### Pushes metal into shape

ONE OF the oldest names in the UK bicycle industry is pioneering an advanced method of metal forming. The company, Haden Bros., which, for well over a century, has been taking cycle frame components in its Birmingham factory.

Rubber bulge-forming is the name of the process which depends on the controlled elongation of a specially assistant grade of rubber under easy pressure to cold-form 'rel tubing' into highly complex shapes.

Based on the operation of a 60-ton hydraulic press, the process consists in inserting a rubber core into the steel tube blank and placing this assembly in a die machined out of the exact shape of the desired component.

The die is fixed to the bed of the hydraulic press, which operates to drive two rams from above and below, applying high pressures to the rubber core and the steel tube from both ends. The effect of this is to compress tube and core and force them outwards into the shape of the die. When this is done and the formed component is released, the rubber core returns to its original shape ready for use on the next blank.

Haden says the crux of the process is the design of the forming tool and it has carried out extensive investigations on determining the length of the

original tubular blank required for any particular component, which has naturally entailed detailed studies of the limits on the amount of deformation that can be achieved.

From the point of view of cost, it is desirable to arrive at optimum deformation with the minimum amount of raw material.

The method is competing with casting, or hot metal stamping followed by extensive machining, which Haden describes as being slower, less accurate and more expensive than bulge forming.

On such equipment, where speed of throughput is very important, a crucial question was the choice of safety system and the designers of the process decided to use the Super-guard unit first presented to the metalworking industries in mid-1978. The reason for the selection was the fact that this safety unit, made by P. J. Hare, cuts unproductive time to a minimum while giving an extremely high margin of safety. It has two lightweight, transparent moving shutters driven by toothed belts and controlled by a pneumatic cylinder. The shutters have cushioned leading edges so that if an operator's hand is caught, there is no danger of injury. The press will not cycle if this happens.

Interlinking the pneumatic control cycle for the guard with the electric controller for the press achieves this.

When the operator has placed a new workpiece in the press and the guard is closing as he withdraws his hand to pick up another blank, the natural path for this hand movement passes over the horizontal bar which actuates the press. There is thus no break in the natural rhythm of his work, and touching the control bar instructs the press to proceed, but when the guard shutters have closed.

Haden Bros., West Ley Street, Birmingham B9 4ES. 021-773 0461. P. J. Hare, Wroughton, Bristol BS18 7NL. 0834 562808.

## COMPONENTS

### Ready-made hydraulics

SKF STEEL of Newport Pagnell has a new "hydraulics package," consisting of cylinder tubes, piston rods and eyebolts, all in compatible materials and produced to any degree of finish required by the hydraulics manufacturer.

Purpose of the scheme is to provide buyers with a facility whereby they may obtain all of their principal components from one source, with guaranteed compatibility and requiring the minimum of in-house machining.

Hydraulic cylinder tubes are offered in o.d. sizes from 60 mm to 250 mm and in lengths of up to eight metres. They are obtainable in hot or cold rolled steel, seamless or welded (DOM) and in any degree of finish from black tube to honed ready for assembly. Similarly, piston rods are supplied in any form from billet or bar or tube to the finished object, again in a choice of materials. The eyebolts, with built in bearings, are made in sizes to suit piston rod diameters from ten to 100 mm and supplied either loose or welded to the rod. The

company will also produce "specials" to order.

Cylinder tube in the new grade SKF 280 has a minimum yield strength of 30.5 tsi and its welding and machining characteristics are in the same category as grade SKF 214, which is one of the bar materials recommended for hydraulic pistons. Standard honing produces tolerances of H11 and further special tolerances of H8 and H9 can be supplied to order.

DOM tubes, which offer even closer tolerances, are welded from strip and drawn over a mandrel and through a die. These offer a yield strength of some 28 tsi and they also are produced in a steel corresponding to SKF 214. Outer dimensions range from 30 mm to 250 mm, with a maximum wall thickness of 14.7 mm. Precision drawing brings the surface finish down to a level which is adequate for most applications, though higher specifications can be met on request.

SKF Steel, North Crawley Road, Newport Pagnell, Bucks.

## ASSEMBLY

### Parts put in their place

UP TO 30 operations per minute, with each operating cycle comprising eight movements, can be carried out by the latest automatic handling device produced by Ariel Automatic Feeders of Leicester.

The unit is designed to pick up and place small and medium-size components or assemblies into jigs, fixtures and machine tools. Functioning can be continuous or on a stop and start basis from a given input signal.

The various movements are powered by a vertical pneumatic cylinder providing an up and down stroke of 25 mm, and a double acting pneumatic cylinder, built into the main body, providing a horizontal movement of up to 100 mm.

Users may select from mechanical pick-up heads with gripper fingers in either a horizontal or vertical position, vacuum lift or magnetic lift. Each of these can be custom designed to suit the type of component and application requirement. Control may be fully pneumatic or electro-pneumatic.

The standard unit moves in one direction but units can be provided with a rotary motion facility with angular travel up to 180 degrees.

Fuller details of the unit may be obtained from the maker at Ariel Works, Temple Road, Leicester LE5 4JG (0533-736541).

## PROCESSING

### Keeps it all moving

AVAILABLE in the UK from Heinrich Fringe of Bonn, is an immersible aerator for waste water processing.

The agitator ensures effective aeration and movement reaching dead spots of sludge which could exist with a surface system says UK distributor Environmental Engineering, 15 Melville Terrace, Stirling, Scotland (0786 63021).

Aerator is a combined pump, blower and dispenser. Units range from 4 hp to 40 hp and have a maximum air capacity

of 273 cfm (470 cubic metres an hour) or oxygen transfer of 150-250 lb an hour (70-120 kg/hr).

Installation of the immersible aerator is said to be simple and can be achieved without costs of removal of existing systems. These can then be used as stand-by equipment or utilised to match unprogrammed and exceptional treatment demands. Only installation requirements, says the company, are for the air intake and mains electric supply.

## ELECTRONICS

### British tape unit

INTENDED for building into data recorders, instruments, office recorders and similar equipment, the C2000 tape transport mechanism is made in the UK by LGM Electronics 22, Station Approach, Fleet, Aldershot, Hants GU13 8QV (02514 28018).

Solenoids provide remote operation of the stop, start, rewind, fast forward and search functions.

Robustly constructed, the mechanism operates from 12 volts dc, has dimensions of 180 x 145 x 60 mm and weighs 1.25 kg.

Operational speed is 4.76 cm/sec in normal forward motion and 15 times faster during "fast wind." Separate motors are used for driving the capstan and for fast winding and a three digit mechanical counter indicates tape position.

## TELEVISION

### Little screens grow

THERE ARE signs that interest and competition in large-screen television, generally provided by means of a projection system, is growing on the UK market.

National Panasonic is offering its five-foot "CinemaVision" (shown here) which has the particular advantage of being an integrated unit, instead of having projection and screen separated by a distance of several feet.

Daryan and Company is introducing a 54-in parabolic screen system and in April Mitsubishi is to launch a 50 in screen receiver.

National Panasonic's design provides high clarity pictures from broadcasts or recordings, visible from distances up to 60 ft.

Designers of the system say there is no problem when the equipment has to be moved, nor from people moving between projector and screen.

Either PAL or modified NTSC standards are accepted so that any organisation or individual using an industrial U-matic format recorder, with friends or professional contacts in North America, can use video recordings without complex or expensive conversion kits.

Theatre TV, offered by Daryan, is a projection system

contrast are automatically compensated as lighting levels change, so avoiding harsh or uncomfortably bright images in darker room conditions.

Either PAL or modified NTSC standards are accepted so that any organisation or individual using an industrial U-matic format recorder, with friends or professional contacts in North America, can use video recordings without complex or expensive conversion kits.

Theatre TV, offered by Daryan, is a projection system

addressing virtually the same market.

The television receiver/projector console supported on a cabinet base, has a three-element projection lens and a dual-speaker arrangement which enables focused sound to be reflected directly from the screen.

Eight programme channel selections with touch-button control are provided any one of which may be used for video tape recorder input. Slide controls are provided for

picture colour, brightness and contrast and for audio volume and tone adjustment.

Two auxiliary switches are incorporated in the console for the control of room lighting, associated appliances and other electrical devices.

Daryan is offering system installation and servicing from its Manchester base, 2 Mount Street, Albert Square, 061 832 8416.

National Panasonic is at 107 Whitby Road, Slough, Berks SL1 3DR. Slough 34522.

## AUTOMATION

### Big engines monitored

FROUDE ENGINEERING has ordered automated engine test equipment for the Spurrier Works of Leyland Vehicles.

This contract, placed with GEC Elliott Process Automation, covers the supply of two GEC 4070 computers. One of these will monitor and control six research and development engine test beds automatically, the other will be a central computer system which will have two-way communication with the test bed computer.

The central computer system will have facilities for the storage of engine test data on cartridge discs, analysis of test results, provision of hard copy test reports and graphical plotting of engine characteristics. This is a new installation and is the first multi-bed computer engine testing system for research and development supplied to British Leyland.

Use of computer-controlled engine testing permits more efficient working and an improved product as a result of better research and development testing.

The engines to be tested on the six test beds will be, typically, current and future designs for use in Leyland heavy goods vehicles and double-deck buses.

GEC-Elliott Process Automation will be responsible for the installation of the computers and commissioning of the system including the interface with the dynamometer controls.

GEC-Elliott Process Automation, New Parks, Leicester LE3 1UF (0533 871331).

**CUBITTS**  
MASTER BUILDERS

known for quality

Holland, Hannen & Cubitts Limited

## COMPUTING

### Link with Euronet

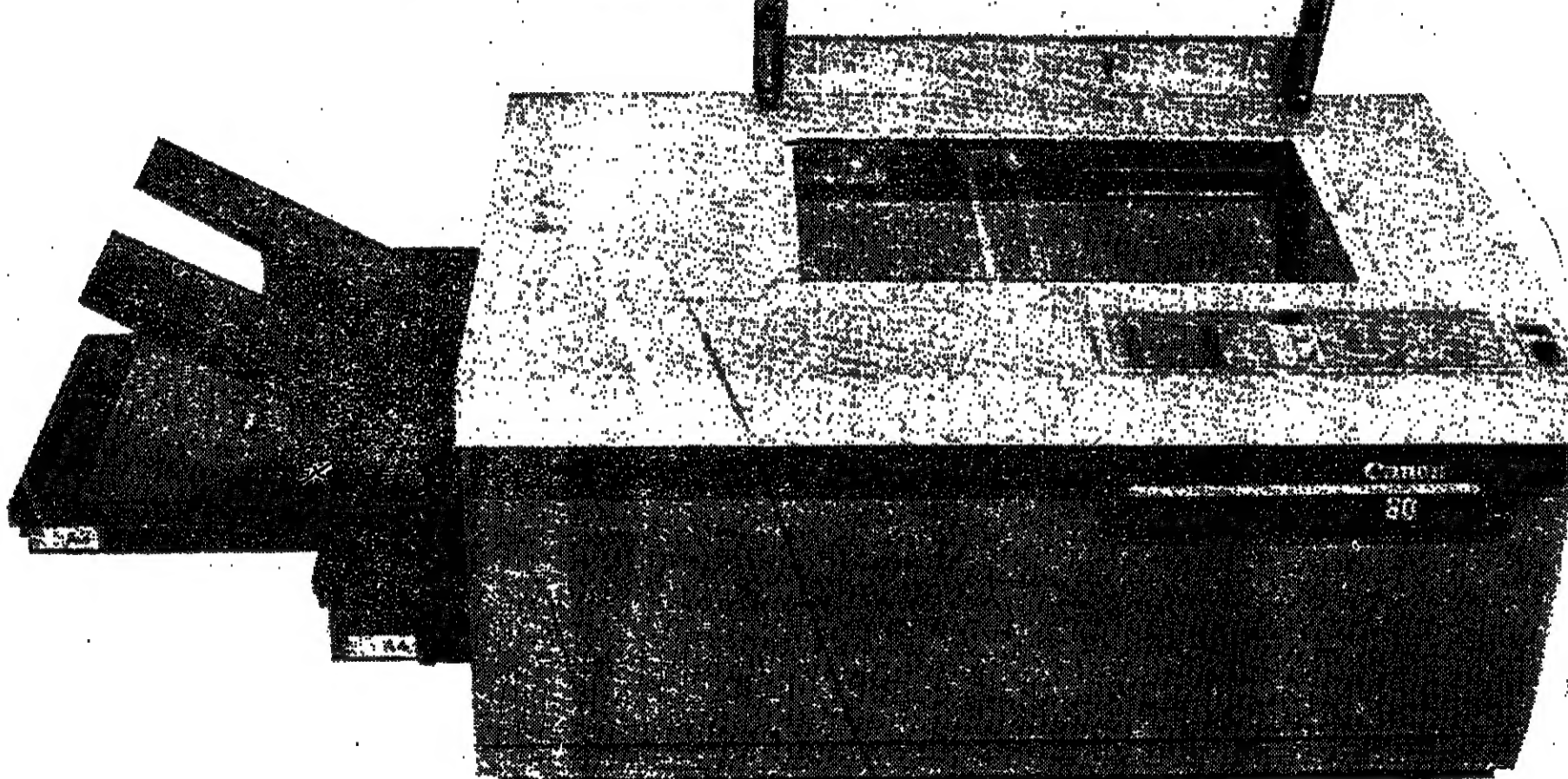
GSI UK, part of the largest computer services company in Europe, formerly CRC, has become the first "host" computer centre in Europe on the IPSS packet switching service. UK users can now access databases running on the GSI service bureau computers at Slough, for the cost of a local phone call.

In order to become a European "host" centre, GSI has had to write its own special communications interfacing software compatible with the X25 protocol agreed by most telephone using countries. It has also installed an Interdata Model 22 front-end processor and designed and built in-house, special hardware interfaces.

At the same time, GSI UK has become the first service company to establish a link with the Euronet service shortly to go live, ready for testing.

The company has also applied for a link with the UK Post Office packet-switched network. GSI (UK) 83 Clerkenwell Road, London, EC1R 5HP. 01-242 0747.

# Now, Canon computerise the copier. Whatever next?



We've always had a reputation for making something which works well, work even better.

Our new NP80 copier is a perfect case in point.

Naturally, the NP80 gives you the same high quality copies you've come to expect from any machine carrying the Canon name. But what puts it light years ahead of any conventional copier is its microprocessor. A mini computer in effect which controls all its functions with split-second accuracy. And automatically monitors the system necessary to keep your copies coming out sharp and clear.

The NP80 is reliable too. Because we've employed solid state electronics. So there are fewer moving parts, and therefore less to go wrong.

You'll find we've replaced push-buttons with a touch-sensitive keyboard. And incorporated a special 'user-assist' system to let you know, at a glance, exactly what supplies or attention your machine requires.

We've also given the new NP80 a very fast delivery—and very deep cassettes to cope with it. You'll find it will produce you 28 A4-sized copies a minute (it can take paper up to A3 should you need it), without any warm up time at all. At a cost-per-copy which is very economical indeed. And you might also like to note that if you need a single copy in a hurry, you can interrupt a longer run. The NP80 will then go back to where you left off.

The new NP80 is just one of the whole range of Canon plain paper copiers. Whatever your copying needs you're sure to find one that's exactly right for you.

The first step to taking the next step forward in copiers is to fill in the coupon right now. Then we can tell you all you need to know about the remarkable new NP80.

**The Canon NP80.  
The Computer Copier  
with touch control.**

To: Canon Business Machines (UK) Limited,  
\*Sunley House, Bedford Park, Croydon CR0 0XF.

I'd like to know more about the NP80 ☐ The whole Canon copier range ☐

Name \_\_\_\_\_

Position \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

Post code \_\_\_\_\_

Telephone \_\_\_\_\_

**Canon**

The next step forward in copiers  
calculators and microfilm.

\*UK inc. Republic of Ireland.

FT29/3K



## UK NEWS — PARLIAMENT and POLITICS

## Callaghan promises early election

BY JOHN HUNT, PARLIAMENTARY CORRESPONDENT

AN EARLY general election was promised by the Prime Minister in the Commons last night when he replied to the Tory motion of no confidence with a spirited defence of the Government's record.

"If we are to succeed, then the country needs a Labour majority at the next election—a working majority—and we shall seek that in the early future," Mr. Callaghan told cheering Labour MPs.

He said that if the Government won the vote at the end of last night, it would still offer all-party talks on the future of devolution, with the Orders repealing the Scotland and Wales Acts being brought before the House for decision before the end of April.

There was a sceptical response from the Conservatives when he went on to announce that there will be a bigger than usual increase in old age pensions this November, to take account of under-estimates in the forecasts made a year ago.

In rousing passages which had strong electioneering overtones, he heaped scorn on Mrs. Thatcher's policies.

He described them as "industrial vandalism" which would lead to constant confrontation with the unions and a wages free-for-all.

Mr. Callaghan made great play with the importance of the Government's "concordat" with the unions, and accused the Tories of intending to sabotage it.

He also had words of warning for investors in the City who have been counting on a Tory victory in the general election.

His advice to them was: "Don't count your chickens before your cheque books bounce."

The Prime Minister poked fun at the Conservative alliance with the minority parties on the vote of confidence. The Tories wanted to get rid of devolution, the Liberals supported devolution and the Scottish Nationalists wanted complete separation for Scotland.

Mrs. Thatcher, he said, had

waited to see what the Liberals and the SNP were going to do and only then had she "found the courage of her convictions."

"What a remarkable display of solidarity," he jeered. "The minority parties have walked into a trap."

It was the first time in recorded history that turkeys had been known to vote for an early Christmas.

Repeating the Government's offer of all-party talks on devolution, he declared: "The Government firmly believes this should be the next step before Parliament takes the final step of debating the Acts and erasing them from the statute book."

The people of Scotland expected Parliament to take devolution seriously and not just treat it as "a by-product of a grab for office."

Turning to the old age pension, Mr. Callaghan said that he could now inform the House of the Chancellor's estimate for the coming year.

The increase would be larger because earnings last year had risen faster than the forecast on which last November's uprating had been based.

To take account of this, the pension of a married couple from next November would go up by about £4.00 a week to reach £35, and a single person's would increase by about £2.50 to a level of £22.

"This will be one more important step to reduce the gap that still exists in our society, to remedy injustice and to erase class divisions," he went on.

"The difference between the Opposition and ourselves is that we know these problems will not be solved by a return to the policies of the early 1970s or by soup kitchen social services."

Dealing with the Government's record, he claimed that it had been one of outstanding social progress and economic performance.

In the years ahead, there would be a great deal for a



Ready for battle: Mr. Callaghan leaves for the Commons.

Labour Government to do in improving industrial efficiency, achieving a return to full employment and bringing down the rate of inflation.

Best progress would be made by adapting existing Labour Party policies which had protected the people of Britain during a period of world recession.

All that Mrs. Thatcher had offered in her speech had been a repetition of the policies which had failed during Mr. Heath's Conservative Government of 1970-74 and which had led to the ignominy of the candle-lit three-day week.

Listing the Government's job saving programmes and record on industrial assistance, he declared: "We are convinced that this basic approach makes for greater success than the free market, free-for-all approach that would abolish grants and financial aid and undermine and destroy these programmes."

The Prime Minister warned of the consequences for Britain of Tuesday's increase in oil prices by the oil-producing countries.

Our supplies were reasonably assured because of North Sea oil and we might escape comparatively unscathed if an oil scarcity developed and high prices restricted the level of output.

At the same time, it would clearly become more difficult, in such circumstances, for Britain to export and jobs in our export industries would be at greater risk.

The consequential effect would work through our economy.

The price increase would have a further adverse effect on world trade and the world balance of payments, especially for importing countries like the U.S. Some countries might well be forced to adopt more restrictive growth and trade policies.

Therefore, there was an

obligation on Britain to be economical in the use of oil. There was a general agreement among industrial countries to reduce oil consumption by 5 per cent, and he believed this to be a minimum reduction which Britain had to work towards.

On the industrial relations front, he argued that the Government's agreement with the unions refuted the belief that "confrontation was the best way to do it."

"Are the events of this winter to become a regular pattern under a Conservative Government?" he asked.

The Government and the TUC had to work as partners.

"Is that agreed or not?" he asked Mrs. Thatcher, as Labour MPs bellowed at her to answer. "Do they prefer to jeer at the prospects of it breaking down, rather than hoping it will succeed?"

The problems would not be solved by Mr. Thatcher's proposal that a Tory Government would withdraw from interference in wage bargaining.

He accused the Conservatives of highlighting individual cases of abuse of union power, and of driving the unions into a corner by painting all their 11m members with the same brush.

He described this as "a dangerous miscalculation."

The Prime Minister maintained that the present Tory leadership was trying to bury the period of the Heath Government.

There were hoots of delight from Labour MPs when he said that Mr. Heath "had been removed from the Conservative Party's collective thinking like Trotsky was blotted out in photographs of the Stalinist era."

When the Conservative Party was last returned to power, property speculators had been given a free hand, and money supply had been increased to finance some "pretty phoney finance companies."

This, he said, had led to one of the most disastrous periods in the City of London.



NEC members arrive at Transport House: Mr. Michael Foot (top left), Mr. Anthony Wedgwood Benn (bottom left) and Miss Joan Lester.

## NEC prepares campaign tactics

BY ELINOR GOODMAN, LOBBY STAFF

LABOUR'S National Executive gave notice yesterday of the way it would like to fight an election campaign, when it unanimously endorsed a statement claiming that a Conservative Government would threaten jobs, add to inflation, and result in confrontation with the unions.

A Conservative administration would, it warned, be a disaster for the British people.

Ignoring the many differences between itself and the Cabinet which will have to be settled before the party's manifesto is agreed, the executive managed

to reconcile the seemingly un-reconcilable in a message piously supporting the Government in last night's confidence vote.

As the representative of the Labour Party, it said, it would continue to press the case for the irreversible shift of wealth and power in favour of the working people.

But in a passage which may comfort those Ministers who hope to tone down the NEC's proposed manifesto, it also acknowledged both the economic and political realities in which the Government had

to contend with over the last few years.

In the circumstances, it said the Government had a record to be proud of.

Despite this show of loyalty, however, the meeting also produced an indication that the Prime Minister may have a tough fight with some executive members over the contents of the manifesto.

Left-wingers called for a meeting of the full executive to discuss the manifesto in the event of a Government defeat.

## Fitt avoids Labour division

By Ivor Owen

THERE WAS no comfort for Government supporters from Mr. Gerry Fitt (SDLP Belfast West) who confirmed that for the first time in his nearly 14 years at Westminster he would not be joining Labour MPs in the division lobby.

He explained that the strong feeling among the minority community in Ulster about the action taken by the Government to increase the number of Northern Ireland MPs—which was bound to benefit the Unionists—made it impossible for him to do other than abstain.

An enigmatic speech by Mr. James Moynihan, leader of the Ulster Unionists and MP for Antrim South, threw little light on the voting intentions of Mr. Enoch Powell and the rest of his colleagues.

He made it clear that the key issue on which the final judgement rested was the prospects for the progress in the "re-creation of local democracy" in Northern Ireland.

Mr. Moynihan stated: "In the position which we in the Ulster Unionist Party occupy in the House, we shall be failing in our elementary duty to the Province and to those who elected us if we did not use our votes tonight to mark in the most emphatic manner open to us our sense—and that of those we represent—that Ulster has a right to local democracy."

"Ulster is still being denied that right."

The Liberal leader, Mr. David Steel, said his party intended to vote with the Tories in favour of an early election—but not because they favoured Conservative policies.

"I do not believe in opinion polls. I believe in the electorate's decision, and I will do my best to dissuade them from voting for a Tory party," he said.

Issues like compensation for Welsh quarrymen should be discussed on their merits and not on whether or not three Plaid Cymru MPs would be walking into the Government lobby.

"I have always taken the view that the future of devolution and the future of the Government are two entirely separate questions."

"The only way to make progress on devolution is through all-party talks."

Not even the Prime Minister thought there was the remotest possibility of bringing the present Scotland and Wales Acts into law.

The Scottish National Party leader, Mr. Donald Stewart, attacked the Government for failing to implement the devolution proposals and to tackle some of Scotland's most serious problems.

"If the events of the past five years have proved anything, it is that the London-based parties cannot be trusted to look after Scotland's interests."

He warned Mrs. Thatcher that if the Conservatives came to power, the devolution problem would not go away.

## Confident PM defies soothsayers

BY PHILIP RAWSTORNE

MR. JAMES CALLAGHAN opened his General Election campaign in the Commons yesterday — and a very formidable opponent he looked.

His horoscope warned him to expect the worst; his bi-rhythms were said to be at their lowest ebb.

On critical days like this, we are likely to have acid, deans, catch colds... and suffer," said the soothsayers.

To Labour's unimpaired delight, the Prime Minister betrayed not the merest hint of a problem — and even less concern about the Opposition's harassment.

Mr. Callaghan had clearly decided, defeat in the Commons or not, that there would be an election before the summer.

That decision made, he turned to the hustings with a rousing verve, cheered to the echo by his backbenchers.

BY IVOR OWEN

TAX CUTS aimed at restoring morale of management and skilled workers will be the top priority of an incoming Conservative government, Mrs. Margaret Thatcher told the Commons yesterday.

She was launching the Opposition attempt to remove Mr. James Callaghan from office.

In one of the most effective passages of a speech which reflected the tension and uncertainties of the occasion, she denounced the tactics employed by the tottering Labour Government to cling to office.

To a roar of approval from the crowded Tory benches, Mrs. Thatcher declared: "What concerns the Prime Minister now is the justified feeling that the substance of matters before the House takes second place to the survival of the Government."

"That feeling is widespread and it robs this Government and the Prime Minister of authority, credibility and dignity."

"The only way to renew the authority of Parliamentary government is to seek a fresh mandate from the people and to seek it quickly."

"We challenge the Government to do so before this day is through."

Mrs. Thatcher argued that the record of the last five years since Labour's return to power—and not just the delay in giving Parliamentary effect to the decisions reached by the people of Scotland and Wales on devolution—justified a declaration of "no confidence" in the Government.

Dealing with the Government's handling of the results of the referendums, she complained that when it had been a time for decision the Prime Minister claimed that it was a time for talks.

"As he had previously spurned them, we were not wholly convinced that the reasons he advanced represented the whole truth," she said.

The Opposition had felt equally sceptical when Mr.

Mr. Callaghan, with effrontery, derided Mrs. Thatcher's alliance with the minority parties — "She found the courage of her convictions."

He scorned the apparent eagerness of the Liberals and SNP for an early election: "It is the first time in recorded history that turkeys have been known to vote for an early Christmas."

The Prime Minister defended the Government's record with vigour, and scoffed at the Tories' policies as little more than the resurrected remains of the Heath Government's programme.

Only Mr. Heath had gone — "He has been removed from the Conservative photographs as Trotsky was blotted out of photographs of the Stalinist era."

Even the speculators were emerging again, Mr. Callaghan

declared. "I warn them not to count their chickens before their cheque books bounce."

But the Prime Minister himself shrewdly inserted a few promissory notes among the sallies.

Labour was pursuing a tighter monetary policy than the Conservatives, he said—but he was happy to announce that it intended to raise old-age pensions by £4 a week in the autumn.

Compare that with the Tory "soup kitchen" social policies, he invited the voters in both the Commons and the country.

Altogether, Mr. Callaghan contrived to sound more ready for an election than Mrs. Thatcher had done in leading the "no confidence" attack.

Not that the Tory leader lacked bite. "The Govern-

ment has failed the nation, lost its credibility, and it is time for it to go," she snapped for a start.

The Government was now more concerned with survival than with governing, she declared.

Labour MPs responded to the taunts with conscious restraint but the Tories cheered her on wildly.

The Government had abdicated authority to strike committees, Mrs. Thatcher charged. It had doubled prices, doubled debt and diminished our defences.

The Tory leader said that the Government had failed to reach every economic target. Its demands for State spending had reduced the country to a "pocket money society."

But the day of reckoning could not be avoided, Mrs. Thatcher suggested sharply that it had now come.

## Thatcher woos voters with tax cuts

BY IVOR OWEN

Each crisis, whether industrial or financial, had been met by the Government with short-term measures.

There had been no serious attempt to deal with the underlying problems, Mrs. Thatcher contended that, in fact, the basic problems had got worse.

The Government had doubled prices, doubled the debt queues, doubled debt, diminished the nation's defences and undermined public respect and confidence in the law.

The present high rates of taxation had caused a haemorrhage of talent in management and resentment among the skilled.

Tax cuts were needed to restore the morale of management and skilled workers and increase the growth of small businesses, the sector to which the nation must mainly look for the provision of new jobs.

Mrs. Thatcher also called for a different attitude to profits which, she said, were pitifully low. She attacked the idea of Government powers being used to direct the investment of savings held by insurance and pension funds.

Successful companies should have no difficulty in attracting investment, and savings in insurance and pension funds should not be used to back Labour.

Labour backbenchers pointed to Mr. James Prior, the Conservative shadow employment minister, who has led the attempt to improve relations between Conservative leaders and the unions, when Mrs. Thatcher restated her belief that action was needed to restore the balance between power and responsibility in the trade unions.

When account was taken of the dominant role of the unions in the Labour Party—they controlled the conference and the executive—she did not believe that a Labour Government would make the necessary changes.

Callaghan expressed his willingness to consider modifications to the Scotland Act, presumably by an amending Bill or totally different legislation.

While his period of office as Home Secretary had shown that he took a "flexible view" about constitutional niceties, she believed that even the Prime Minister might find it difficult to arrange for such major changes to be carried through the present Parliament when, at most,

"This Government has doubled prices, doubled debt queues and debt, diminished our defences and undermined public confidence in the law"

it had only three working months left.

"Any such changes must be for a new Parliament," Mrs. Thatcher insisted. "The only decision the Prime Minister really took was to delay the decision."

Mrs. Thatcher gave her pledge that incentive tax cuts will be "top of the list" of priorities of an incoming Conservative government when she broadened the attack by accusing the Prime Minister of having failed to achieve any of the economic objectives which he had himself set.

The 5 per cent wage norm laid down for the fourth phase of the social contract had never been accepted.

"It created the very confrontation which the Prime Minister boasted he had replaced by co-operation," she scoffed.

At the same time, Mrs. Thatcher recalled, the people of the country had had to watch the Government abdicating its authority to strike committees.

"People expect rubbish to be cleared, schools to be opened and hospitals to be functioning—and they are not."



Mrs. Thatcher, the Tory leader, leaves her Flood Street home for the House of Commons.

## UK ECONOMIC INDICATORS

ECONOMIC ACTIVITY—Indices of industrial production, manufacturing output (1975=100); engineering orders (1975=100); retail sales volume, retail sales value (1971=100); registered unemployment (excluding school leavers) and unfilled vacancies (000s). All seasonally adjusted.

	Indl. prod.	Mfg. output	Eng. order	Retail vol.	Retail value	Unempl.	Vacs.
1977							
4th qtr.	105.3	101.8	100	104.7	239.6	1,431	137
1978							
1st qtr.	107.0	102.2	99	106.4	245.4	1,409	188
2nd qtr.	110.7	104.5	85	107.9	254.4	1,367	213
3rd qtr.	111.4	104.9	103	110.7	265.6	1,350	213
4th qtr.	109.6	102.5	112	110.7	272.5	1,340	230
Oct.	108.5	101.7	100	110.5	267.9	1,350	238
Nov.	109.4	102.3	130	110.5	269.7	1,339	231
Dec.	111.0	103.4	110	113.3	279.5	1,321	231
1979							
Jan.	104.4	94.9		108.6	273.1	1,339	236
Feb.				111.5		1,363	231
March						1,350	236

OUTPUT—By market sector: consumer goods, investment goods, intermediate goods (materials and fuels); engineering output, metal manufacture, textiles, leather and clothing (1975=100); housing starts (000s, monthly average).

	Consumer goods	Invest. goods	Intmd. goods	Eng. output	Metal mfgs.	Textile Housg.
1977						
4th qtr.	104.7	97.4	114.3	98.3	94.5	100.0
1978						
1st qtr.	105.3	98.8	116.3	99.9	96.6	98.0
2nd qtr.	107.8	99.2	122.4	99.8	107.1	17.1
3rd qtr.	107.6	98.8	123.2	100.8	101.2	23.0
4th qtr.	105.8	96.2	123.0	98.8	97.2	20.1
Oct.	105.5	96.0	122.0	99.0	100.0	25.0
Nov.	106.0	96.0	121.0	98.0	97.0	24.3
Dec.	106.0	97.0	126.0	97.0	99.0	20.7
1979						
Jan.	100.0	94.0	118.0	94.0	79.0	9.9

EXTERNAL TRADE—Indices of export and import volume (1975=100); visible balance; current balance; oil balance; terms of trade (1975=100); exchange reserves.

	Export volume	Import volume	Visible balance	Current balance	Oil balance	Terms trade	Resv. US\$bn
1977							
4th qtr.	117.3	102.4	-16	+530	-659	102.4	20.39
1978							
1st qtr.	119.6	113.8	-590	-361	-620	105.4	20.63
2nd qtr.	122.2	110.0	-173	+135	-414	104.5	16.75
3rd qtr.	124.9	114.4	-365	-49	-901	105.7	16.35
4th qtr.	123.1	112.5	-107	+167	-490	106.7	15.77
Oct.	125.9	111.3	-146	+167	-490	106.0	15.97
Nov.	122.6	114.1	-186	+12	-183	107.3	15.67
Dec.	126.7	113.0	+67	+187	-183	106.5	15.69
1979							
Jan.	113.1	103.3	-119	+1	-60	107.7	16.26
Feb.							16.62

FINANCIAL—Money supply M1 and sterling M3, bank advances in sterling to the private sector (three months' growth at annual rate); domestic credit expansion (Em); building societies' net inflow; HP, new credit; all seasonally adjusted. Minimum lending rate (end period).

Lending rate (semi period)							
	M1	M3	Bank advances	DCE	BS inflow	HP lending	MLR %
	%	%	%	£m			
1977							
4th qtr.	23.2	12.6	8.7	+698	1,639	1,189	7
1978							
1st qtr.	24.3	22.8	17.5	+1,811	1,049	1,263	6
2nd qtr.	8.5	15.7	24.5	+2,857	694	1,396	10
3rd qtr.	16.8	9.3	8.6	+1,114	748	1,235	10
4th qtr.	9.7	5.7	8.5	+1,487	878	1,423	12
Oct.	13.8	5.5	1.9	+541	363	379	12
Nov.	12.1	10.7	9.9	+1,200	261	506	12
Dec.	9.7	9.7	8.8	+826	234	449	12
1979							
Jan.	13.6	16.4	21.3	+897	269	491	12
Feb.	21.7	10.7	24.2	+1,070	231	491	12



# Take the direct line to profit in Scotland

Now there's a direct route to profitable industrial growth in Scotland.

It's the direct line through the Scottish Development Agency—a new source of finance for industrial projects.

No matter where you're based—in Scotland and wishing to expand, or thinking of Scotland as a manufacturing base, the SDA can meet your capital requirements.

Set up to stimulate Scotland's industrial development and to create opportunities for growth, the

SDA can deal with all enquiries and information on industrial investment.

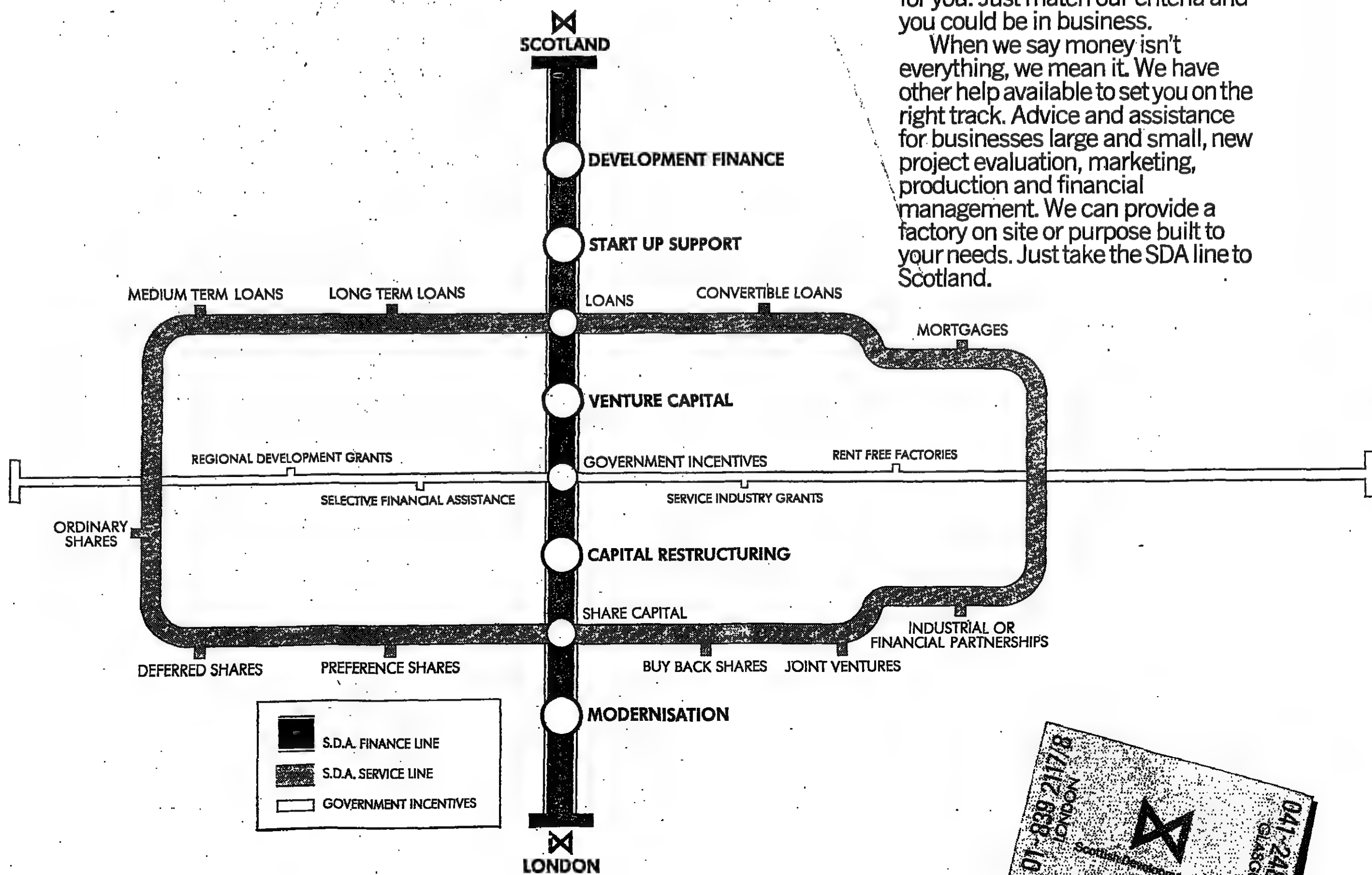
If your business is set for expansion, the SDA can bridge some of the gaps in the availability of money that other sources do not always meet.

For example, the SDA is one of the

few sources of venture capital, putting equity and loan finance behind new products and advanced technology. Or it may be money to help develop the next stage of your company, to improve your capital structure—or modernise your plant.

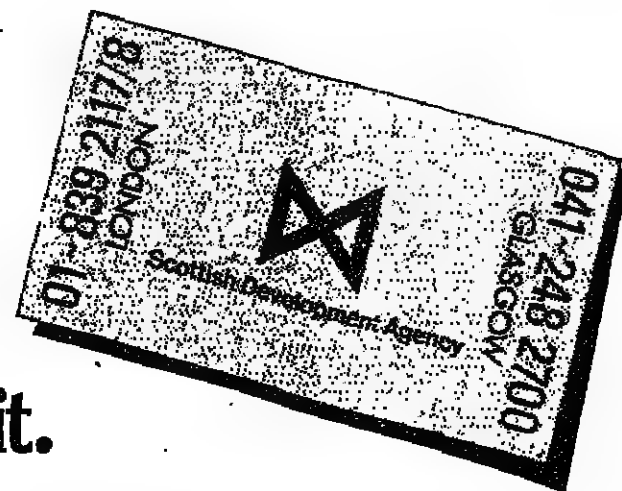
All this, plus government incentives, could be very profitable for you. Just match our criteria and you could be in business.

When we say money isn't everything, we mean it. We have other help available to set you on the right track. Advice and assistance for businesses large and small, new project evaluation, marketing, production and financial management. We can provide a factory on site or purpose built to your needs. Just take the SDA line to Scotland.



The express way to profit.

Head Office, 120 Bothwell Street, Glasgow G2 7JP  
Tel: 041-248 2700 Telex: 777600  
London Office, 17/19 Cockspur Street, London SW1Y 5BL  
Tel: 01-839 2117/8





## THE MARKETING SCENE

EDITED BY MICHAEL THOMPSON-NOEL

## A lesson from von Clausewitz

BY MICHAEL THOMPSON-NOEL

IT WAS CARL VON Clausewitz, the well known brand manager, who said: "In such things as war, the errors which proceed from a spirit of benevolence are the worst." Later, he told the annual sales convention: "Power used at the right moment against the right adversary brings more power." Finally, in his famous address to the stockholders' meeting, he articulated one of the great laws of marketing: "Many assume that half efforts can be effective. A small jump is easier than a large one, but no one wishing to cross a wide ditch would cross half of it first."

Von Clausewitz, of course, was never a brand manager. He was a Prussian military strategist who in his treatise, *On War*, may be said to have distilled Napoleon into theory. On the other hand, the alleged links between marketing and war are such that in some quarters, at least, von Clausewitz is now held to be (at least half seriously) the first great marketing strategist.

It is true there are superficial similarities between those who wage marketing and those who wage war. Marketing departments attack

or defend. They concentrate their forces on target markets in target territories, and talk about penetration, deepover, secret weaponry, allocation of resources, communications backup, tactical breakthroughs and retaliatory action. In moments of genuine hysteria they even pack up their troubles in their old kit bag and sack their advertising agency.

But is the relationship between marketing and warfare anything other than superficial? Those who wanted to find out trooped into London this week for a conference organised by AMR International and the Marketing Society called boldly: *Marketing Warfare*.

From the UK there were delegates from Beecham, Unilever, RHM, Metal Box, Cadbury, Guinness and General Foods, among others, while from Europe, which turned out in force, there were plane drops from Italy, France, Germany, Austria, Spain, Switzerland and Scandinavia.

At lunch the first day the troops were addressed by no less a military celebrity than Gen. William Westmoreland, who recently retired from the U.S. Army and is now a Board

director of a number of corporations.

The general rattled through the principles of war—objective, offensive, manoeuvre, surprise, security, simplicity, and so on—but spent much of his time dredging up quotations from Sun Tzu, a Chinese general of the fifth century BC. "Sun Tzu said: 'In war the way to avoid what is strong is to strike what is weak.'" "Sun Tzu said: 'All men can see these tactics whereby I conquer, but what none can see is the strategy out of which victory is evolved.'"

Al Ries, chairman of Ries Cappiello Colwell, helpfully discussed the strategic square, thereby defining the four types of marketing warfare to which the conference was addressed: defensive, as in the case of a dominant market leader like General Motors in the U.S.; offensive, as in the case of a strong No. 2 like Ford, flanking, as in the case of a minority market shareholder like Chrysler, and guerrilla, as in the case of American Motors.

According to what Mr. Ries calls a glittering generality, one should be playing defence, two should play offence, three should flank

and the remaining 94 should be guerrillas.

The rules of offensive marketing warfare were these: the main consideration was the market leader's strength. Too many companies considered only their own strengths and weaknesses. An attack should be launched as far as narrow front as possible. Offensive wars should be waged with narrow lines, preferably single products. The attack should be launched at the leader's weakest position. The only success that American Motors has enjoyed in recent years, said Mr. Ries, was its Buyer's Protection Plan, an attack against the poor service reputation of GM dealers. A classic case of offensive warfare, he said, was Procter and Gamble's assault on Colgate with its Crest toothpaste, which was launched not only with a \$20m advertising budget but with a P and G version of the English longbow—the American Dental Association's seal of approval.

By definition, he says, defensive marketing warfare is a game only market leaders should play. The best defence is good offence. A leader should always introduce new products and services before the competition. Says Clause-



South Vietnamese militia units near Phu Lam, 1972. According to current U.S. theory, 94 per cent of all marketing companies should adopt guerrilla tactics and learn to fight another day.

witz: "The statesman who, seeing war inevitable, hesitates to strike first is guilty of a crime against his country."

Flanking warfare? Says Clausewitz: "Where absolute superiority is not attainable, you must produce a relative one at the decisive point by making skilful use of what you have." In practice, says Mr. Ries, this means attacking IBM where IBM is weak; not where IBM is strong. The principles for flanking are these: (1) Good flanking moves must be made into uncontested areas. Digital Equipment Corporation introduced a small computer before IBM; Michelob was the first U.S. premium-priced beer. (2)

Tactical surprise should be an important element. (3) The pursuit is as important as the attack.

Guerrilla warfare, which according to Mr. Ries ought to be the marketing mode of 94 per cent of companies everywhere, is based on three broad principles: (1) Find a market segment small enough to defend. (2) No matter how successful you become, never start behaving like the market leader. (3) Be prepared to retreat at any time, for the company that runs away is the one that fights another day.

There was no end of tactical support material from speakers anxious to explain how their companies had

successfully outmanoeuvred the opposition with one of these four techniques: Johnson and Johnson and Godfrey Davis on the offensive front, for example, Heinz and Playboy Enterprises with defensive case histories, the director of marketing research at Twentieth Century Fox with an example of flanking and speakers keen to spell out how speed and agility had helped guerrilla operations compete in markets dominated by much larger competitors.

It was all very useful if you want to join West Point. But the metaphor of war was absurdly overblown. In any case, the military is not infallible. Michael Walzer, Professor of Government at

Harvard, has just published a book, *Just and Unjust Wars* (Alan Lane, £7.50), which casts illumination on how the military think.

He writes: "Though generals agree on the meaning of strategic terms—entrapment, retreat, flanking, manoeuvre, concentration of forces, and so on—they nevertheless disagree about strategically appropriate courses of action. They argue about what ought to be done. After the battle, they disagree about what happened, and if they were defeated, they argue about who was to blame. Strategy, like morality, is a language of justification."

Which ought to justify another conference.

## Selling soap at the interface

IS YOUR SALESFORCE aware that at the functional interface between selling and distribution there is an overburdened need for interfunctional trade-offs so that it can prioritise changes in organisational structure and strategic orientation in readiness for the incremental sales downturn expected midway through next fiscal?

I hope not, writes Michael Thompson-Noel, for how can it sell soap if it is paralysed by jargon? Yet marketing is riddled, from head to toe, by so much gobbledegook borrowed from the management sciences that it is a small-scale miracle that some marketing departments even think clearly enough for a sufficient length of time to sell a single pot of fishpaste.

A. C. Nielsen, the market research company, has just produced the first issue of an international review called *Marketing Trends* that contains an article by Dr. Dieter Pommerening of McKinsey's Hamburg office. The article is titled *Brand Marketing: Fresh Thinking Needed*, and sets out to discuss marketing in the 1980s and the problems brand marketers will face in dealing with a growing array

of government agencies, regulatory authorities and public interest groups as well as the new trends in consumer behaviour and consumerism.

Fair enough, except that at some points it reads as though the jargon is the message. Dr. Pommerening's views undoubtedly deserve a wider audience, though it is a pity he has to resort to the language of "interfunctional trade-offs."

In his view it is high time for a fresh look at accepted marketing concepts and approaches. In many respects, he says, the concept of product marketing is already overburdened.

"But we can go a step further. In the 1980s, strategic marketing will be a prerequisite for survival. Telling the consumer which white is whiter will no longer be marketing's principal concern."

## Nostalgia

The role of marketing in consumer companies has altered greatly just in the course of the past three decades. In response to changes in the business environment it has already gone through at least three distinct phases—the 1950s, when the

manufacturer was king; the 1960s, when marketers were unequivocally oriented towards the consumer, with strong brand policies that many still look back on with nostalgia; and the 1970s, during which intense pressures from retailers had tipped the balance of power once more and left many manufacturers nursing weakened brand franchises, idle plant capacity and slumped-down profits.

"It is no longer enough to manage product sales, market share and net contribution. Today, individual trade customers need to be managed as profit centres... with the same level of management attention that brands have historically enjoyed under the product management system. This implies an integrated sales/marketing concept whereby product and account strategies are co-ordinated and balanced. It is perhaps ironic that this is basically no different from the approach many industrial manufacturers have adopted for many years in managing their product range across a spectrum of a few large customers."

However, if today's need is

to supplement product marketing with trade marketing, says Dr. Pommerening, tomorrow's prime requirement will be strategic marketing. "Marketing must develop a new self-awareness. Gradually, it will have to take on the role of corporate peace-setter."

What does he mean? He means that manufacturers have to make some very radical decisions and some very radical changes. Consumer goods manufacturers have to decide whether they plan to keep faith with the brand and invest accordingly for the long term. The only alternative, apart from diversification, is an abdication of the marketing role and a reversion to a narrow manufacturing business base, supplying the trade and the surviving brand marketers with low-cost products.

## Keep smiling

"Either one is, of course, feasible; but the company that allows itself to drift into a middle course between the two is headed for strategic disaster. That, unfortunately, is a risk many manufacturers appear to be running today."

"Does marketing really need to rethink its role? Clearly, the answer is yes. Product marketing is not obsolete, but there is already an urgent need for it to be complemented by trade marketing and the systematic management of functional interfaces. In the future, the marketing man himself has to assume the role of strategic peace-setter for his company based on a clear understanding of the complex range of internal and external issues raised by the new trading environment."

Setting aside all functional interfaces, I take it that what Dr. Pommerening is really saying is that in order to keep selling Smash and Bisto and Hovis and Lucozade and Dairy Milk and Galaxy and Persil and Oxo and Weetabix and Fairy Liquid on the scale and at the profit to which they have been accustomed, marketing departments must keep abreast of the times, learn to live with the growth of consumerism, smile bravely at all those government agencies and regulatory busybodies and... keep the product moving. I wish he'd said it.

**More sales prospects with real growth potential. Every businessman's dream?**

**Get the wide-awake facts here.**

To: Marketing Services Division  
Dun & Bradstreet Ltd  
25 Abchurch Lane  
London EC4N 3DF  
Tel: 01-475 2200  
Fax: 01-475 2201  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
Postcode \_\_\_\_\_  
Daytime Tel. \_\_\_\_\_  
Evening Tel. \_\_\_\_\_  
Fax \_\_\_\_\_  
Dun & Bradstreet  
There's no question, we'll be in touch.

**WHO'S WHO**  
In Advertising and Marketing  
Knows how... to solve your Recruitment Needs  
JOHN GEISMAR finds the best Advertising and Marketing Executives for the best jobs in the U.K.  
TERRY READ finds the best Sales Representatives and Managers for the best jobs in the U.K.  
**WHO'S WHO KNOWS WHAT'S WHERE**  
Contact us when you need help  
London Executive Placement Bureau,  
138 Wardour Street, London W1V 3AD. Tel: 01-734 3622/3644

## Berry for Y &amp; R job in N. York

NORMAN BERRY, deputy chairman of the London ad agency Davidson Pearce Berry and Sportswood, is joining the Board of Ogilvy and Mather in New York in mid-summer as executive vice-president and executive creative director. Mr. Berry started Davidson Pearce Berry and Tuck in 1964 and six years later became chairman of the newly formed DPBS, now London's 14th biggest agency with 1978 billings of £21m. DPBS is owned by O&M.

In the U.S., according to the latest survey by Advertising Age, Ogilvy and Mather International was the fourth biggest U.S. agency last year in terms of world billings (\$1,003bn), the fourth in gross world income (\$153.9m), and the fifth biggest in income outside the U.S. (\$82.5m).

In terms of world billings, the top three in the AdAge survey were: 1. J. Walter Thompson, \$1,486bn (gross international income: \$222m); 2. McCann-Erickson, \$1,45bn (\$211m); 3. Young and Rubicam, \$1,386bn (\$204m). According to the full survey, 629 agencies scored a combined 1978 gross income of \$3,465bn (+20 per cent) on total billings of \$23.3bn.

## Northern poise wins £1.2m

YOU DON'T need a smart Mayfair office and ranks of leggy temps to run a successful advertising agency, as demonstrated this week by Redheads Advertising of Newcastle and by C. B. Brookes - Advertising of Uttroster. (Altogether there are 129 IPA-registered agencies in the provinces compared with 176 in London.)

Redheads has won the £500,000 Louth Textiles account in competition with Saatchi and Saatchi, Gairdner, Compton, Landsdowne Marketing (the JWT subsidiary) and Graham Poulter Associates of Leeds. With northern poise the agency said yesterday that the same Redheads team of Hamish McPherson, Jim Dobson and

Alan Lambert that organised the Louth pitch was also involved in the £800,000 Northern Gas Board account win against Saatchi's a year ago. Managing director Ronald Redhead says billings are now £3.5m, which in 1978 would have put it into the Campaign Top 100.

In turn, C. B. Brookes has won the Lancer Boss trucks account, which together with another gain takes Brookes' new business wins this year to £300,000.

● **BENTON AND BOWLES** is handling the launch of Bird's new instant custard for General Foods and has been asked to handle GF's total media buying, which exceeds £5m.

● **SCHWEPPE'S (AGENCIES)**, which recently withdrew from

the Perrier Group operation, Acqualia Spring Waters, is spending £200,000 on a campaign for its imported still water. Evian, second to Perrier in the total mineral water market. Last year, claims Schweppes, volume sales of Evian were 35 per cent up. TV ads will be used in London and on Southern during April and May.

● **HALFORDS**, the auto accessories, cycles and leisure goods retailer, has started a £400,000 TV and Press campaign via Boase Massimi Pollitt Univas.

● **THE SIXTH**, entirely new edition of the British Code of Advertising Practice will be published on April 10.

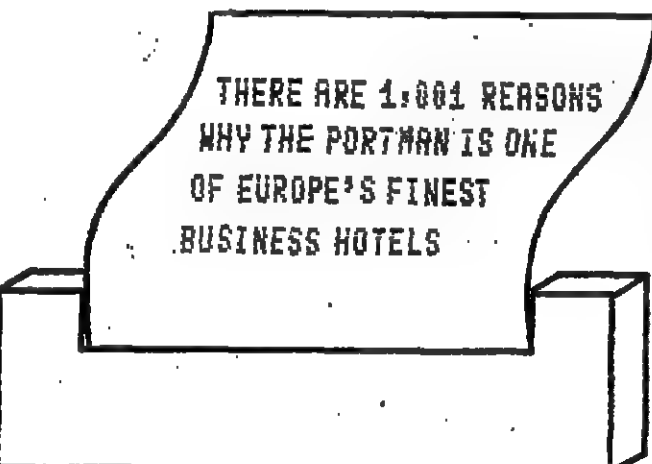
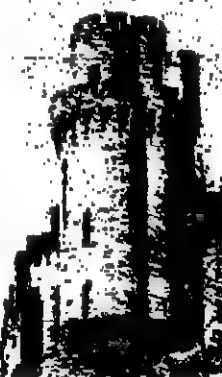
## Warwickshire

We think it's the best location for new industry in the country

Check for yourself; Send for the facts.

To: Jeremy Howell, Industrial Development Adviser  
Shire Hall, Warwick. Tel. (0926) 43431 Ex. 2102

Name \_\_\_\_\_ Company \_\_\_\_\_  
Address \_\_\_\_\_



THERE ARE 1,001 REASONS WHY THE PORTMAN IS ONE OF EUROPE'S FINEST BUSINESS HOTELS

For instance, you get

- Teletext, the TV press-button information service (in nearly all rooms).
- Prestel, the even more advanced small-screen service (we're the first hotel in the world to provide it).
- Full secretarial services (for the executive who just can't get away from it all).
- Telex, cable, telegraph and teletypewriter facilities; car hire, airline and theatre bookings (all conveniently in the main reception lounge).
- A complex of suites and a versatile 3-in-1 ballroom (for the top-level conference, the key presentation, the grand banquet).
- A handy pocket-size radio page (so you can hit the town confident that important messages will be passed to you).

Six good reasons. Then what about the other 995?

That's the number of discerning executives, give or take a dozen or two, who every week make The Portman their London base. They keep us on our mettle. And that's why the standards of service and comfort they look for can't be bettered anywhere.



For all you want to know on room bookings, contact Esther Carter on 01-486 5341 (Telex 261526). The Portman Hotel, Portman Square, London W1H 9PL.

## CAR LEASING THROUGH HERON COULD BE THE BEST DECISION YOU'LL MAKE THIS YEAR.

Heron Leasing could save your company thousands. Heron Leasing in 15 major cities and all over London.

To find out more telephone or tear off the corner of this ad and send it freepost with your letterhead to J. Edwards, Heron Leasing Limited, Freeport, Wembley, Middx., HA9 8BR.

Tel. No. 01-903 4811.

**HERON LEASING**  
SO MUCH MORE THAN A GOOD PRICE

## COMMUTERJET

FIVE TIMES DAILY TO LIVERPOOL

Your fastest route from London to the Merseyside area is by British Midland Commuterjet, flying to Liverpool Airport. Heathrow to the heart of Merseyside takes just 45 minutes. Commuterjet gives you five flights every working day and three on Saturdays and Sundays. With just as many return services.

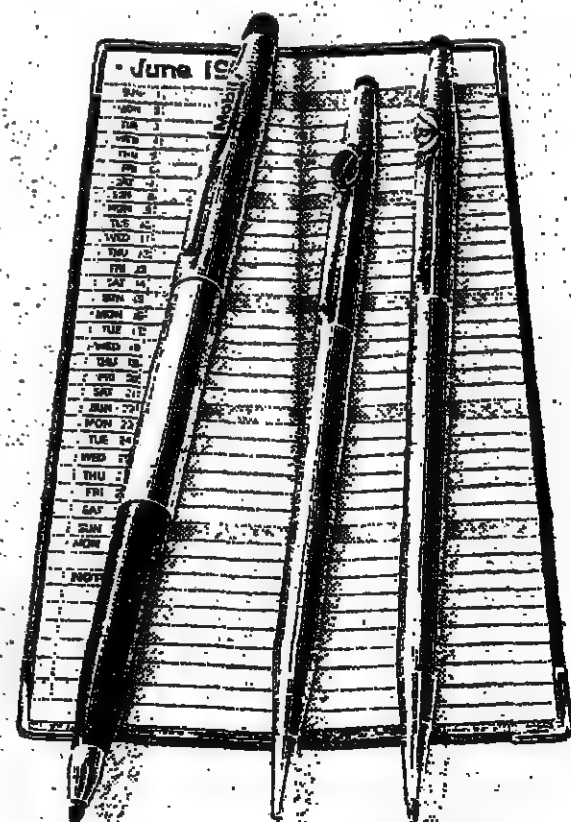
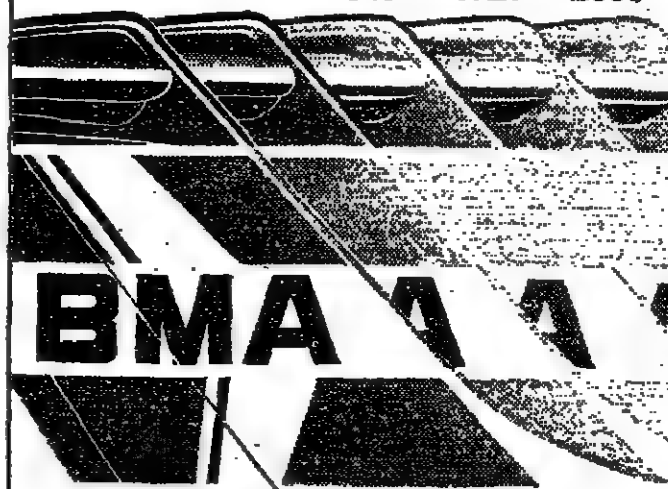
So the next time you want to go up to Merseyside, you know what to do. Fly the comfortable DC9 Commuterjet and relax with a drink and British Midland's friendly smile.

British Midland

The friendly independent.

For full details contact your travel agent or telephone 01-492 0864.

Departure  
0840 1110 1345 1720 2000



Every day for a lifetime.

The distinctive black top on a Cross writing instrument is recognised worldwide as a guarantee of taste and excellence.

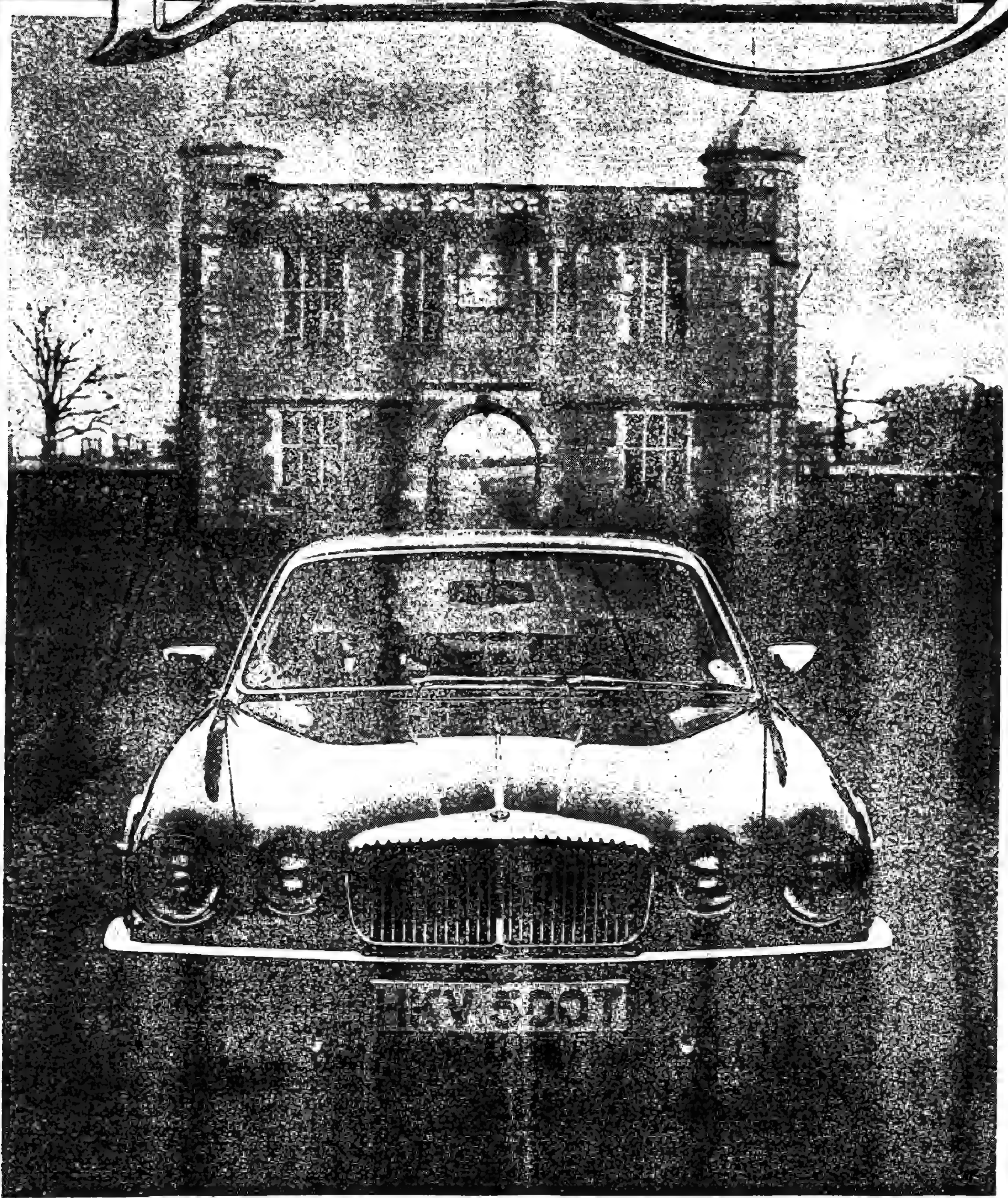
The instrument it adorns makes the perfect business gift. Available in a variety of finishes including lustrous chrome, rolled gold, sterling silver and solid gold. Cross writing instruments can be engraved, or carry a custom corporate emblem.

For further information contact:  
A.T. CROSS (UK) LTD.,  
Concorde House, Concorde St.,  
Luton LU2 0JD, Beds. Tel: 422793.

**CROSS**  
SINCE 1846



# Daimler



## ENTER OUR NEW DAIMLER.

Change for change's sake has never been part of the Daimler philosophy. And demonstrating once again that a superb design, unremittingly and painstakingly perfected over the years, is far superior to a constantly changing concept, we today present the Daimler Series III. To improve on motor cars which are considered by many to be the finest in the world has been no easy task; continuous refinement to the

specifications and subtle treatment of the styling have resulted in a Daimler range which is sleeker, more spacious and even more lavishly equipped than ever before.

The new cars, the Sovereign and Double Six, the Vanderbilts 1.2 and Double Six, combine supreme smoothness, effortless power and ultimate technical brilliance.

In the Series III is a beautiful blend of

everything that Daimler has always stood for and everything that today's motorist and driver will expect his Daimler to offer.

# Daimler



Manufacturers of fine motor cars through five reigns.



# What senior managers think of recruiters

By MICHAEL DIXON

CAN IT be coincidence? I wondered the other day. There had just dropped on to my desk the first printed version of the IFM Recruitment Code.

The code, as persevering readers will know, was suggested by the Jobs Column two years ago and has since been developed by the Institute of Personnel Management into a short statement of expected practice, spelling out the basic courtesies due both from recruiters and from job-applicants in their dealings with one another.

What probably was coincidence was that the new leaflet fell from its envelope on to a pile of truculent letters. And these made it uncomfortably clear that this column had unwittingly proved yet once again the need for the above-mentioned code.

The only difference between the first proof which sparked the idea in 1977 and the second confirmation was that this time I had done it the other way round.

Two years ago the experiment began with a column declaring that a candidates' charter was needed to protect job applicants from unwarrantable abuses by employers. Immediately recruiters and employers began to burst out all over with protests that what was really needed was a charter, if not the reinstatement of the death penalty, to protect recruiters (to borrow the terms

of the IFM's new leaflet) "against the thoughtless, the unreliable, the rude and the downright dishonest who surface in any large batch of job-applicants." So the Jobs Column came up with the idea of a two-way code for mutual protection.

The opposite course of events this year began with an article in mid-February which, at the request of certain consultants and personnel managers, reminded senior managers particularly that they should not behave like (as my Lancashire grandmother would have put it) Lord Muck when applying for jobs on the open market.

On such occasions the only important person was the one who would read the letter of application or conduct the interview, and so decide the candidate's fate, the article asserted. Even the best top executives could not afford to take shelter in their localised reputations, and sit there writing scrawled incoherent sketches of themselves "out into the void," like some dyslexic, palsied, amnesiac version of Scott of the Antarctic. Instead they ought to market their applications to the needs of the job in question, and address themselves clearly and considerately to the recruiter.

The clutch of letters which arrived here in answer were absolutely clear and to the point. Fortunately, the main target was not me, but what the

letters' authors consider is the stupefyingly low standard of recruitment consultants and employers that seem to be around nowadays.

## Complaints

Various of the complaints were of discourtesies ruled out by the six requirements for recruiters' behaviour, which together with five tit-for-tat deencies on the part of job-applicants, constitute the IFM code. So clearly far too few people on the employers' side have so far read the provisions, copies of which can be obtained from the institute's Theon Wilkinson at Central House, Upper Woburn Place, London WC1H 0HX—telephone 01-387 2844.

Other letters, however, complained of two main faults which lie deeper than discourtesy.

The first is muddled administration, from which top managers tend to shy away as the horses of the defeated King Croesus of Lydia did from the chariots of the Medes and Persians—*if Herodotus is to be believed, anyway.*

Now, before the recruiting fraternity fire off yet another phalanx of letters from their side of no man's land, I will say that I know how senior managers sensitive to bad administration elsewhere, are

liable to be inert to its existence in their own organisations. But it surely does not matter that the other party may be equally blameworthy when shoddy administration on the part of a recruitment concern can so easily wreck its reputation with a loquacious executive of a stature which generally guarantees heedful hearing of his or her opinions.

Moreover, such muddles may be answered by the sort of piquant revenge which, although unknown to the recruiter, is likely to be sniggered about elsewhere. Take for example the top executive who applied for a job through a widely known consultancy and after weeks of receiving no answer even to his repeated inquiries, suddenly received a form thanking him for attending the interview—to which, of course, he had never been invited.

"To test them," the executive wrote to me, "I sent them the travelling expenses that I would have incurred had I been to their office. My thin confidence in the status and ability of such enterprises was then fully diluted when I received a cheque in settlement, together with a typed letter saying how much the consultant had enjoyed meeting me and looked forward to seeing me again if another of their assignments interested me!

"This sort of massive stupidity is beyond comment," the manager's letter went on. "I hasten to add that the cheque was not returned but forwarded to a charity since that firm needed penalising."

Although the consultancy concerned is known to me, I am not going to reveal its name, because I also know that it is far from the only one which lets administrative nonsense of the same ilk happen to its customers on the candidate side. Such stupidities are not only beyond comment. Any recruitment concern which is not itself stupid needs also to ensure that they are beyond possibility.

## Charming, but...

The second main fault castigated by numerous of the letters is less damaging to middle-men recruiters such as consultancies and agencies, than to the interests of the employing concern.

There being no point in false modesty, I wrote one reader making the second type of complaint, "I feel certain you will accept my curriculum vitae as showing that I am doing very well. But I am ambitious to do still better, and so apply pretty often for advertised jobs that could make more for all involved of my obvious ability in senior management and, of greater

importance, in business.

"Though I have been seen by some very charming chaps in head-hunting firms, however—chaps who are much more pleasant to chat to than I am, to be sure—most of them obviously knew very little about general management and nothing at all about business, on any significant scale at least.

"It astounds me that companies which need to fill senior positions and specify the need for candidates with proven records like mine, should then place the selection in the hands of people who are incompetent even to discuss the matters which any candidate worth his salt knows that he needs to know. They would do better to give the task to their prettiest office girl. Then at least they would not be causing able men to give up hours of their time without offering them anything worth pursuing."

While not endorsing that reader's sexist attitude, I can only agree with his main point. But in this case the responsibility for correcting the fault surely lies, not with the culpable middle-man recruiters—who could hardly be expected to sack themselves—but with the highest levels of management of the employing concern.

## Financial Director Designate

The Company is part of a large International Group, with very diverse interests in the UK.

They seek a Chartered Accountant whose first task is to become thoroughly familiar with all the Group subsidiaries and the financial control and accounting systems. Changes proposed and approved will then be implemented, and the initiation and direction of forward planning will be a prime responsibility. Success will be followed by promotion to Financial Director.

Candidates must be strongly business and profit orientated with a sound record of service in first-class commercial or industrial companies.

Age: 38 to early 40's.

Salary: Upper five figures negotiable.

Location: London.

Write in strict confidence to Mr D Reid, Managing Director, Charles Martin Associates Ltd, Executive Selection Consultants, (Ref. CMA/1173), 23 Collège Hill, London EC4R 2RT, giving summary of career, including personal details, positions held and salaries commanded.

**CHARLES MARTIN**

**ASSOCIATES LIMITED**

## Accountant/ Company Secretary

c.£10,000

Mayfair

Our client is a fast growing public company in the commercial property business with its head office in new premises in the heart of bustling Mayfair, London.

The company requires an enthusiastic qualified accountant aged around 30 who would enjoy a high level of involvement in the day to day management and development of the business. You will be directly responsible to the managing director for all accounting and secretarial duties, with active participation in the preparation of cash flow projections, financial appraisals and Stock Exchange documents. Some commercial experience is required. Career prospects are excellent for someone whose technical abilities and commercial acumen can meet the expanding needs of the company.

Candidates should apply with brief details quoting Ref. No. AC235/FT to:

W.S. Gilfillan,  
Thornton Baker Personnel Services Limited,  
Fairfax House, Fulwood Place, London WC1V 6DW.

A member of the Management Consultants Association

Personnel and Industrial Relations Consultants

## Project Manager Financial Accounting Standards Board

USA

c. £25,000

Our client is the organisation responsible for establishing standards of financial accounting and reporting throughout the private sector in the USA.

Reporting to the Director, Research and Technical Activities, via an Assistant Director, the Project Manager will be responsible for the formulation of accounting standards. This process includes problem identification, the preparation of a discussion memorandum, public hearings, an exposure draft, and a final statement. The Project Manager supervises a group working on research, analysis, evaluation and documentation, to tight schedules.

Candidates must be qualified accountants, preferably degreed. They must be analytical, articulate and intellectually interested in the subject. Ten years good relevant experience is required, including either audit management, project management, or a senior level appointment in a major organisation well reputed for its financial sophistication. The position also demands maturity, and the personality to be effective in liaison with top level executives in government, industry and commerce.

The attractive compensation package is in keeping with the importance of the position. Stanford, Connecticut is an enviable location, and affords easy access both to New York and to New England's recreational areas.

For an application form, write in confidence showing how you meet the specification and quoting reference 1858/T, to J. H. Cobb,

Peat, Marwick, Mitchell & Co.,  
Management Consultants,  
Executive Selection Division,  
165 Queen Victoria Street,  
Blackfriars, London, EC4V 3PD.

## Board Appointment

£13,000 - £15,000 plus car

City based

A Financial Director is now required for a Division of a major British Company with a turnover of £200m per annum. Candidates aged 35/40 must be Chartered Accountants and preferably hold a second business qualification. He/she will have held a senior financial appointment for a substantial company. A mixture of experience in both manufacturing and service businesses where emphasis has been placed on close contact with line management, in addition to expertise in the finance function, is essential.

As a member of the Divisional Board, the successful candidate will contribute to the design, implementation and development of organisational changes and financial strategy. He/she will also be responsible for the improvements in the quality of basic accounting and planning systems together with the further development of the existing computerised systems. The development of systems relative to control of assets, particularly working capital and cash, also forms a major responsibility of this position.

Please write in confidence or 'phone B. G. Luxton (Ref. 6367).

**mh**

**Mervyn Hughes Group**  
2/3 Cursitor Street, London EC4A 1NE  
Management Recruitment Consultants

01-404 5801

## Group Chief Accountant

c. £12,000 + car + bonus

London

A Group Chief Accountant is required for a National High Street retailer with substantial interests overseas.

Candidates aged 33-40 will be Chartered Accountants who currently hold a senior financial appointment ideally - but not essentially - in a multi-outlet retail business. Essential requirements include proven ability to direct a large staff, substantial experience of computerised systems and an understanding of corporate taxation. Firm leadership qualities, a sense of diplomacy and the ability to win respect and communicate with colleagues are also essential. The salary will be c. £12,000 plus a car and profit sharing bonus. Other benefits include pension, BUPA, discount purchases and generous relocation expenses.

If you closely match our client's requirements apply in confidence to Bernard L. Taylor quoting Ref. 6369.

This appointment is open to male or female candidates.

**mh**

**Mervyn Hughes Group**  
2/3 Cursitor Street, London EC4A 1NE  
Management Recruitment Consultants

01-404 5801

## Chief Internal Auditor

c. £12,000 + car

East Anglia

Fisons Limited, an International Company which manufactures and markets agrochemicals, fertilizers, horticultural products, pharmaceuticals and scientific equipment requires a Chief Internal Auditor. He/she must be a Chartered Accountant aged around 35 with wide industrial experience gained in a major company. A degree and a European language would be an advantage.

The Chief Internal Auditor will provide to the Chief Executive and top Management a continuous and independent review of the financial and operating controls of the company and subsidiaries throughout the UK and Europe. He/she will also carry out specific assignments Overseas.

Objectivity and creativity allied to business acumen and an awareness of the key importance of the finance function in a major group are essential.

The appointment offers excellent opportunities for further career development. Benefits are those of a multi-national industrial company.

Please write in confidence or 'phone B. G. Luxton (Ref. 6366).

**mh**

**Mervyn Hughes Group**  
2/3 Cursitor Street, London EC4A 1NE  
Management Recruitment Consultants

01-404 5801

## Arabic Speaking Accountant

Credit Finance-

Saudi Arabia c.\$25,000

This newly formed finance company, based in Jeddah, specialises in the corporate market. The need is for an ambitious young accountant who will handle the financial systems, and who will be able to develop rapidly to assume greater financial responsibility and become more involved in commercial and underwriting activities as the company grows.

Candidates, in their late 20's and fluent in Arabic and English, should have a professional accountancy or banking qualification from Europe or the U.S.A., and, ideally, sound experience in hire purchase, banking or other credit finance operations.

Starting salary will be around Saudi Riyals 7,000 per month (approx. U.S. \$25,000 p.a.) and a 2 year renewable contract will include free furnished accommodation, car or allowance, and annual home leave.

Please airmail brief career details - in confidence - to A. R. Duncan ref. B.1090-1.

**MSL**

United Kingdom Australia Belgium Canada  
France Germany Holland Ireland Italy  
New Zealand South Africa South America  
Sweden Switzerland U.S.A.

Management Selection Limited  
International Management Consultants  
17 Stratton Street London W1X 6DB

## Architect

The Prudential has perhaps the largest and most varied property portfolio in the private sector in the Commonwealth. For many years an Architects Department has been maintained whose main function is to design and execute new developments but which also has a supervisory role for projects for which the Company is providing finance.

The main objectives are good design, economic viability and sound construction to reduce future maintenance costs.

There is a vacancy for an experienced qualified architect aged about 35-45.

Remuneration, which is reviewed annually, will depend on qualifications and experience and there is a non-contributory pension scheme. Because of the present age structure, career prospects are good.

Applications, with curriculum vitae, which will be treated as confidential, should be marked "Personal" and addressed to:

The Staff Manager,  
The Prudential Assurance Co. Ltd.,  
142 Holborn Bars, London EC1N 2NH.

**Prudential**

## GROUP ACCOUNTANT

Working Area c. £8,500 + Car

A development appointment within a highly successful independent group of 10 operating companies in the financial services sector providing the option of personal development in a specialised consultancy role.

Preference will be given to Chartered Accountants aged under 30. Call Robert Miles on 01-248 6321.

Personnel Resources Limited 01-248 6321  
Financial Appointments - Hilgrove House, Old Bailey, London EC3M 7HS

## Jonathan Wren - Banking Appointments

The personnel consultancy dealing exclusively with the banking profession

**EUROBOND SALES EXECUTIVE** Salary negotiable  
A leading Accepting House seeks to appoint a Eurobond Sales Executive.

The successful candidate will be responsible for maintaining the bank's existing relationships with institutional investors, and for expanding and developing the placing function throughout the group.

A close knowledge of international capital markets and the investment community is essential.

Please telephone in confidence, or send a detailed Curriculum Vitae to: PETER S. LATHAM

First floor - entrance New Street  
270 Bishopsgate London EC2M 4LX 01-623 1266



## Director General

Wool textile confederation  
above £15,000

Looking to the 1980s and seeking to adapt to changing opportunities of trade and conditions of competition, the individual British wool textile trade associations and organisations are merging to form a unified trade federation/employers' organisation. The new body will represent the interests of over 600 member firms engaged in the various aspects of combing, spinning, manufacturing and finishing for both wool and allied fibres. The Director General will be expected to lead and further unite a permanent professional staff in improving the present excellent service to members on commercial, legal, technical and industrial relations matters. He or she will be responsible for advising on policy and for implementing the decisions of a Policy Board. Since the person appointed will often be required to act as spokesman for the industry in national and international forums,

experience of presenting industry viewpoints to government departments, associated trade associations and the media is essential. An appreciation of the UK and world-wide textile environment would be advantageous, as would fluency in French. Salary is negotiable at not less than £15,000 plus car and excellent fringe benefits. Relocation assistance will be provided to Yorkshire.

PA Personnel Services

Ref: GM33/6826/FT

Initial interviews are conducted by PA Consultants. No details are divulged to clients without prior permission. Please send brief career details or write for an application form, quoting the reference number on both your letter and envelope, and advise us if you have recently made any other applications to PA Personnel Services.

### PA Personnel Services

Hyde Park House, 60a Knightsbridge, London SW1X 7LE. Tel: 01-235 6060 Telex: 27874



A member of PA International

## Financial Director

c. £12,000

This public engineering group is managed by a talented and successful young team and is a world leader in its particular field of high-quality components. Employed capital is around £41.2 million, concentrated mainly in the principal subsidiary to which the appointment initially relates. Financial disciplines are well-established and the successful candidate will be expected to maintain and improve the quality of financial and management information provided. Reporting to the Managing Director, he or she will need to be particularly strong in the fields of cost accounting, systems work and capital project planning and forecasting. Some foreign travel will be

involved. Candidates should be qualified accountants aged upwards of 28 who have managed an accounting team of around 20. Remuneration is negotiable around £12,000 plus car and BUPA. Location to the west of London.

PA Personnel Services

Ref: AA34/6831/FT

Initial interviews are conducted by PA Consultants. No details are divulged to clients without prior permission. Please send brief career details or write for an application form, quoting the reference number on both your letter and envelope, and advise us if you have recently made any other applications to PA Personnel Services.

### PA Personnel Services

Hyde Park House, 60a Knightsbridge, London SW1X 7LE. Tel: 01-235 6060 Telex: 27874



A member of PA International

## Finance Systems Development

C.London

c. £9500 + Car

Our client forms the Headquarters of one of the world's most successful marketing and manufacturing organisations.

They are currently updating and standardising their financial reporting procedures worldwide, and now require a young, experienced and qualified accountant to work closely with their Group Reporting Systems manager.

You will be particularly involved in the integration of all financial and management reporting on a sophisticated computerised system, liaising with subsidiary and associate company management on a regular basis. You will also assist in the preparation and analysis of group performance results.

Ideally you will be a numerate graduate holding a professional accounting qualification, with approximately 2 years exposure to computerised systems in an industrial environment.

Ambition, self motivation and commercial acumen will be essential personal attributes within this challenging environment.

Please telephone or write quoting ref. RG 2140.

**Lloyd Chapman Associates**

123, New Bond Street, London W1Y 0HR 01-499 7761

## FRUSTRATED EXECUTIVE: What's stopping you?

Wrong job? Wrong company? Wrong people? Or could it be a wrong attitude—yours? You probably don't know. Unaided, you can't be expected to. Self-appraisal isn't easy, even for those accustomed to appraising others. But we can help you. We can show you how good you are—and at what. We can help you obtain the right job, if you're in the wrong one. With the right company and the right people.

As for the right attitude, once you know yourself, you'll take it. You'll manage your career. Meet us for a confidential discussion about it. It won't cost you anything or place you under any obligation. But, if you continue with us, chances are there'll be no stopping you! Simply dial 01-734 0752, and ask for Donald Ham. Or write to him at

**Royston Ridgeway** career managing people  
Kent House, 87 Regent Street, London W1.

## Marketing Director

TI Markland, one of the largest tube stockholders in the U.K. with a turnover approaching £20M pa, markets a comprehensive range of pipe, tube, fittings and related products.

The company now wishes to strengthen its senior management team by the appointment of a Marketing Director who in addition to having total responsibility for providing a comprehensive professional marketing service will be expected to play an important role in the company's future business policy and development programme.

This is a new appointment which demands that, initially, considerable emphasis will be on the establishment of a marketing function and the speedy and effective development of the existing data base in which the company's new computer will be a vital component.

Candidates, male/female, should preferably be over 30, possess a degree or equivalent and, ideally a relevant professional qualification.

It is essential that the business experience of applicants includes a number of years directing or managing a marketing function where all aspects of marketing have been successfully practised—particularly those associated with computer information and analysis.

The total remuneration package will be negotiable around 5 figures and includes all the rewards, benefits associated with a senior appointment in a large successful company within a major group.

Please apply providing full career details to:

W.R.C. Frost, Personnel Director,  
TI Steel Tube Division,  
TI House, Five Ways, Birmingham B16 8SQ.

**TI Markland**

A member of the



Steel Tube Division

## Financial Controller

City

c. £15,000

An established but continually growing insurance company offers excellent career prospects to an ambitious young finance executive.

The company is an important member of a long established and well known City group with wide international interests.

As a member of a small, highly motivated, management team the successful candidate will have opportunities to exercise initiative and to use financial, analytical and administrative skills.

Candidates, probably in their late 30's, should preferably be qualified accountants with a university degree. Experience in the insurance business is highly desirable and knowledge of banking, foreign exchange investments and cash management are also important.

Apart from a realistic, negotiable salary, there are other very attractive benefits.

For an application form, write in confidence showing how you meet the specification and quoting reference 20707/T, to J. H. Cobb,



Peat, Marwick, Mitchell & Co.,  
Management Consultants,  
Executive Selection Division,  
165 Queen Victoria Street,  
Blackfriars, London, EC4V 3PD.

## Young Bank Officers

Algemene Bank Nederland N.V. is one of Europe's largest banks with a network of branches throughout the World. Owing to rapid expansion we are seeking the services of a number of experienced young bankers to augment the staff of our London offices.

Ideally, candidates will be in their mid twenties and will be qualified AIB or in the process of completing their examinations. The positions vacant will be filled by well motivated people who have wide basic experience in general banking and are now looking for early career progression together with the opportunity to extend their knowledge in a fast expanding environment.

Competitive salaries, commensurate with experience, will be offered together with benefits associated with a leading bank.

Written applications, giving brief relevant details, should be addressed to:

P.B. Bank, Personnel Manager,  
ABN Bank, 61 Threadneedle Street,  
London EC2.

**ABN**

**L. MESSEL & Co.  
Breweries**

L. Messel & Company wish to recruit an experienced

## ANALYST

of high calibre to join a successful small team servicing institutional clients in this sector.

Evidence of experience and ability as an Analyst will be required and particular emphasis will be placed upon direct or indirect knowledge of the industry.

The position has considerable scope and an attractive remuneration package is envisaged.

Applications should be sent to:

P. D. H. Oswald,  
L. Messel & Co.,

100, Old Broad Street, London, EC2P 2HX

## Training Manager

Middle East

\$40 - 50,000 tax free

A challenging career opportunity  
with a distinguished Middle Eastern Bank

Our Client is a substantial commercial bank with an enviable record of growth in recent years. This growth and the bank's future expansion plans have created the requirement for a thoroughly experienced training manager to assume responsibility for the implementation and development of current and future training needs.

Ideal candidates will be in their 30's with a successful record in the areas of training and general personnel management. This experience will have been gained in the field of international banking and, in addition to personal qualities of maturity and self-sufficiency, fluency in Arabic is regarded as essential.

This represents a most rewarding career opportunity with an outstanding salary and fringe benefit package to match the importance which the bank attaches to this responsible position.

Contact Norman Philpot, MIPM, in confidence  
on 01-248 3812

**NPA Recruitment Services Ltd**

60 Chiswick Road, London W2 4LJ. Telephone: 01-248 3812/3/4/5

## Senior Systems Development Accountant

U.K. Atomic Energy Authority

Harwell

The United Kingdom Atomic Energy Authority, set up by Act of Parliament in 1954, is a world leader in research into the design, development, construction and fuelling of nuclear reactors for generation of electricity. Its research and development activities give rise to an annual expenditure approaching £200 million with the employment of over 13,000 people.

Due to expansion at Harwell in both nuclear and non-nuclear fields on a commercial contract basis, for a wide range of customers, an exceptional career opportunity to join the senior management team has arisen for a Systems Development Accountant.

The job

Responsible for developing and maintaining effective costing and management accounting systems. The position demands previous successful experience of flexible management information systems utilising modern data processing techniques.

Candidates of either sex, ideally aged 35 - 45, must be qualified accountants, preferably chartered, with several years experience in a senior post in an organisation involved in research and development activities in the scientific, engineering or technical services industries. They must possess the tact and ability to communicate and to develop good working relationships with a wide range of personnel of different backgrounds. Successful applicants are likely to be currently earning at least £8,000 p.a.

Employment benefits include an attractive index linked pension scheme.

Write in confidence providing brief details of relevant background and experience, quoting reference 1627/L, to D.I. Grant,



Peat, Marwick, Mitchell & Co.,  
Management Consultants,  
Executive Selection Division,  
165 Queen Victoria Street,  
Blackfriars, London, EC4V 3PD.

## Financial Consultants

up to £12,000

At PA our comprehensive involvement in corporate and business consultancy has shown us that even the most sophisticated organisations value the specialised and objective advice of external experts on broader financial issues and in instances of major change. Our consultancy service to commercial, industrial and public sector clients therefore concentrates, typically, on areas of significant management concern such as business and financial planning and control, corporate financial reviews, and the design and implementation of management information and control systems. Distinguishing features of our work are the extensive use we make of computer-based systems and the broader business know-how which we apply to every assignment we undertake. Many of which are on a multi-discipline team basis. This extends into a

necessary involvement in implementation and managing the process of change as it affects the company and its staff.

This is a role which will attract qualified accountants (ACA, ACCA or ACMA), probably aged 28-32, with several years experience in industry and a practical knowledge of computer applications. You must also have a broad business awareness and, since our work is international in scope, a European language would be an advantage. Additionally, we have a vacancy for a prospective consultant, aged 26-28, seeking to enlarge on their current experience. Development prospects are excellent.

Please write in confidence giving essential career details and showing how you meet the main requirements, to: The Personnel Manager, reference FAD.

### PA Management Consultants Ltd

Bowater House, 68 Knightsbridge, London SW1X 7LJ. Tel: 01-589 7050.



A member of PA International

## Jonathan Wren Banking Appointments



The personnel consultancy dealing exclusively with the banking profession

### CREDIT ANALYST (Middle East)

c. £12,500

This is a permanent appointment with a leading financial institution in one of the Gulf's major financial centres. Our client wishes to engage an experienced Credit Analyst, aged mid-to-late 20's, who will ideally have received formal training in credit appraisal techniques within an American or other international bank. The individual appointed will be responsible for reporting to senior management on proposed and existing loans. Interviews for this position will take place in London during mid April.

Please contact: RICHARD MEREDITH

### INVESTMENT ANALYST

£ negotiable

A leading merchant bank wishes to recruit an additional Investment Analyst. The successful applicant, aged mid 20's, will probably have a degree in Economics with a mathematical flavour, but other graduates will also be considered. Starting salary is negotiable and there is an attractive range of fringe benefits.

Please contact: PETER S. LATHAM

### STERLING MONEY BROKERS

£ negotiable

Our clients, leading money broking firms, have vacancies for brokers with upwards of two years' experience in Interbank or Local Authority sections.

Please contact: BRIAN GOOCH or SOPHIE CLEGG

First floor—entrance New Street  
170 Bishopsgate London EC2M 4LX 01-6231266



# Under Secretaries

Senior Management in Central Government  
£15,000+

A small number of senior appointments are to be made to the Civil Service at Under Secretary level. This is a unique opportunity for men and women with recent substantial experience and responsibility in an industrial, financial or commercial organisation at board, senior management or comparable level. The successful applicants will be appointed to positions in departments of state suited to their particular experience and ability. All, however, will have in common an accountability for a distinct and sizeable area of government administration with major responsibilities for decisions and management within that area, for advising Ministers on matters of national policy, and for external relationships with the private and public sectors.

Candidates should normally be aged over 40 and under 52 and, although formal qualifications are not required, they must be of the intellectual calibre of the holder of a good honours

degree or senior professional qualification. Preference will be given to those who have specialised in the fields of financial control, project management and appraisal, corporate planning, personnel management and industrial relations. Some direct experience of dealing with government departments or their agencies would be an advantage.

Salary (inner London): £15,238 from 1 April 1979; £16,824 from 1 April 1980. The appointments, which are likely to be outside the London area, will be pensionable and may be permanent or, in special circumstances, for a fixed period (normally 5 years) with the possibility of extension.

For further information and application form (to be returned by 23 April 1979) write to the Civil Service Commission, Alencon Link, Basingstoke, Hants, RG21 1JB or telephone Basingstoke (0256) 68551 (answering service operates outside office hours). Please quote ref G/5003/L.

## Financial Controller

Chartered Accountant with about three years post qualified experience required to take the accounting responsibility for a division of a growing international organization dealing in the leasing of capital equipment.

The work involves the general financial accounting of the division, financial analysis, transactions and cost accounting. Ability to work without close supervision is essential. The position will be based in London but some international travel would be involved. This position will be of interest to those

earning in the region of £9,000 p.a. at present and there is also a generous range of fringe benefits. Closing date for applications: APRIL 9, 1979.

Ref: A8733/FT.

REPLIES will be forwarded direct, unopened and in confidence to the client unless addressed to the Security Manager listing companies to which they may not be sent. They should include comprehensive career details, not refer to previous correspondence with PA and quote the reference on the envelope.

### PA Advertising

Hyde Park House, 60a Knightsbridge, London SW1X 7LE. Tel: 01-235 6060 Telex: 27874



A member of PA International

## Managing Director

MIDLANDS at £25,000

\* A medium size engineering Group with substantial overseas interests seeks a top level executive for the position of Managing Director of its U.K. operations which have a turnover approaching £100m.

\* The prime task is to provide leadership and co-ordination to a number of Divisions working in a highly decentralised, autonomous environment and thereby increase an already above-average profitability.

\* A graduate, aged early forties, with General Management experience in large-scale manufacturing industry would be preferred but numeracy and drive are essential requirements.

\* A generous salary, bonus and fringe benefit package is available and assistance with relocation to the Midlands will be given if necessary.

Please send short c.v. in confidence to the Group Chief Executive, Box A6696, Financial Times, 10 Cannon Street, EC4P 4BY.

## Financial Controller

(15 manufacturing units)  
c. £12,000 + car

Located in London, our Client is a well known company and one of the leaders in its sector. Engaged in the manufacture and sales of fast moving consumer goods throughout the world, the U.K. operations are being restructured and a new position has been created for a Financial Controller. Reporting to the Managing Director, the appointee will be responsible for the total Financial and Management Accounting functions. There are currently around forty staff in the Accounting departments. Of particular importance will be the need to establish improved management standards throughout the accounting activities and beyond. There will thus be close liaison with the other members of the management team to achieve greater effectiveness and profitability. Candidates, male or female, must be qualified accountants, minimum age 30, who have had sound manufacturing accounting experience. The ability to motivate a large team, and a decisive management style are essential.

Benefits include a car, free BUPA and a non-contributory Pension Scheme. Please apply in writing, giving your telephone number, and quoting Ref: 920, to Peter Barnett, FIPM, M.I.M.C., Barnett Keel Ltd, Providence House, River Street, Windsor, Berks, SL4 1QT. Tel: Windsor 56723. Telex: 849323.

**Barnett Keel**  
MANAGEMENT SEARCH

## Financing Administrator

A major International Group, with an annual turnover in excess of £700 million, is seeking an Administrator for the Group Financing Department at its Head Office in central London.

He/she will join a young professional team which is responsible for the Group's financing operations both in the UK and overseas, including the management of sterling and foreign exchange, project and export financing, leasing and cash management.

The successful applicant will be fully responsible for the administration of the Department and will have gained relevant experience in an International Banking or corporate environment.

The appointment offers an attractive salary and incentive bonus with the usual large company benefits appropriate to the considerable importance and responsibilities attached to the job.

Please write in confidence giving full details of your age, qualifications, career history and salary progression to date, stating the names of any organisation to whom your letter may not be sent, to: B. Canwell, Ref: 497/FT.

## Whites

Whites Recruitment Limited  
72 Fleet Street, London EC4Y 1JS  
Offices: Bristol, Glasgow, Leeds, London,  
Manchester and Wolverhampton.

### Assistant Managers

## MERCHANT BANKING

P. S. Refson & Co. Limited is seeking two additional Assistant Managers for its New Business Department.

The successful candidates will be aged 27-32, hold university degrees and/or professional qualifications and have, at least three years' international banking experience. A sound knowledge of trade finance and a proven aptitude for credit assessment are essential. Fluency in foreign languages and a readiness to travel at short notice will be further recommendations.

Salary, rewards and prospects will reflect the importance attached to these positions and will satisfy the most ambitious. Please reply in confidence to:

The Managing Director,  
P. S. Refson & Co. Limited,  
13, Austin Friars,  
LONDON EC2N 2HE.

## Assistant to Deputy Chief Executive

A British Group, based on London, which markets engineering products throughout the world wishes to make this new appointment. The business is expanding and the successful candidate will be required to assist a busy Deputy Chief Executive in a wide range of duties, including financial, legal and commercial activities. This would lead into a position in general management in due course.

Candidates, male or female, should be Chartered Accountants. Experience in commerce would be an advantage. Preferred age 28/34. Personal qualities in this appointment are most important. Starting salary around £9,000.

Please apply in strict confidence quoting reference 1799 to Clive and Stokes Ltd., 14 Bolton Street, London W1Y 8LL.

**Clive & Stokes Ltd.**  
Appointments & Personnel Consultants

## Manager - Financial Planning

South Wales, c. £8,000

The company, part of a major group, is investing heavily in its production capacity and technology. A prime need, therefore, is high quality financial forecasting and capital project control and these form the major objectives of this position. Candidates should be in their late 20's or early 30's and

must be qualified accountants from the profession or industry and should have experience of current trends in computer-aided forecasting and control. Innovative ability and the strength of character to pursue change is most important. Relocation expenses are good and career prospects are excellent.

J.H.E. Davies, Ref: 37109/FT

Male or female candidates should telephone in confidence for a Personal History Form to: CARDIFF: 0222-40516, 74 Churchill Way, CF1 4DX



**Hoggett Bowers**  
Executive Selection Consultants

BIRMINGHAM, CARDIFF, GLASGOW, LEEDS, LONDON, MANCHESTER, NEWCASTLE and SHEFFIELD.

APPOINTMENTS ADVERTISING  
RATE £16 PER  
SINGLE COLUMN CENTIMETRE

## MANAGEMENT ACCOUNTANT

from £9,500 p.a. neg.

Diacarb Division, situated at Ndola, Zambia—part of the Boart International Group—is the principal supplier of diamond and tungsten carbide rock-drilling tools to the Zambian copper mines. Our workforce numbers approximately 350, including 35 expatriates.

We require a newly-qualified (or finalist) ACCA or ACCA with experience in an industrial engineering environment. Reporting to the Chief Accountant you will take full charge of the management information system. An important part of your brief will be the upgrading of the present integrated standard costings system, to provide a more comprehensive variance analysis.

The position offers a challenging working environment, superb climate, and excellent social and sporting facilities.

The salary for this position is fully negotiable—and could be extended to the range £10,700-£12,000 should an applicant of sufficient seniority show short term potential for promotion to Chief Accountant of one of the Group companies. A 25% gratuity will be added at the end of each renewable 2-year contract.

Benefits include free furnished housing, settling-in and baggage allowances, interest-free car loan, medical aid scheme, educational and travel allowances, and seven weeks leave a year.

Interviews will be arranged in the U.K. in early May. Please write for an application form, giving full details of your experience and qualifications, and quoting reference no. 28/FT to:

Mrs. M. E. Coombes, 40, Holborn Viaduct, London EC1P 1AJ.

**BOART ZAMBIA**

## Management Accountant Merchant Banking

Chase Manhattan Limited is the major unit of Chase Manhattan Bank's merchant banking Group. Our principle products are loan syndications, bond issues, private placements and financial advisory services.

You will report to the Financial Controller whose small team make up the Financial Management unit, providing high-quality management information. Progressively assuming responsibility for management information, financial planning, and the financial control function, you will also provide full support in annual profit planning.

A graduate, preferably with a formal accounting qualification from a recognised body you should have a broad

training in a variety of financial and management accounting systems, including EDP systems—ideally in development rather than usage. Banking or merchant banking experience would be a distinct advantage but is by no means essential.

We offer a salary in the region of £8,000 per annum, and the substantial benefits of a major international bank which include preferential mortgage and personal loan schemes, and non-contributory pension and life assurance.

Please write with full career details to:

Janice Shiner Chase  
Manhattan Bank NA,  
Woolgate House,  
Coleman Street,  
London EC2.



**CHASE**

## TREASURER

Age: 35-45 Up to £10,000

Central London

Our client is a major public company in retailing, wholesaling and distribution. They require a Treasurer, who will operate within the Finance Division. The responsibilities include the management of the Group Treasury function; utilising surplus funds and determining and making available additional cash resources as required. The candidate will be required to maintain close contact with bankers, money brokers and financial institutions. An integral part of the work will be to develop cash forecasting procedures.

Candidates should have an accountancy qualification or alternatively have had relevant treasury experience in a large company, banking or a financial institution. A car and other fringe benefits will be provided.

Please send a comprehensive career résumé, including salary history, quoting ref: 973/AA to:

W. L. Tait,  
Touche Ross & Co.,  
Management Consultants,  
4 London Wall Buildings,  
London, EC2M 5UJ,  
Tel: 01-588 6844.



**Good 'A' Level Results?  
Interested in Finance?**

If you have three good 'A' levels including a mathematical subject, and are under 20 with accommodation in the London area and are interested in an opportunity in Finance, we would like to hear from you. Your on-the-job training would equip you to progress within Shell's Finance Function, and there would be good promotion prospects for those with ability, drive and initiative.

Starting remuneration would be circa. £3,600 including London Allowance. Contributory Pension Fund. Free lunches. 4 weeks annual holiday. Membership of our sports and social club would be available to you, with its wide range of facilities including a swimming pool and squash courts in the building.

Telephone or write for an application form to Shell International Petroleum Company Limited, LP/112, Shell Centre, London SE1 7NA, 01-934 2828.



SISSA



## SCANINVESTMENT SERVICES S.A. SENIOR INVESTMENT OFFICER

Scaninvestment Services S.A., Geneva, jointly owned by Scandinavian Bank Limited, London and Banque Scandinave en Suisse, Geneva, is seeking to appoint a Senior Investment Officer to assist in developing its expanding investment management and financial advisory services.

Duties will include the formulation of investment proposals for Governmental, institutional and private clients; the analysis of economic indicators and forecasting of interest and foreign exchange rate trends; shared responsibility for marketing the Company's services.

Candidates, aged 28-35, will probably already be working in international fund management, merchant or investment banking or related fields. The main qualifications required are a good degree or professional qualification; proven ability in Euro-currency and foreign exchange markets; a good knowledge of international bond and related markets and an ability to work independently.

The successful applicant will be located in London and will be expected to travel widely. An attractive salary and other benefits appropriate to an appointment in banking will be offered.

Applications, which will be treated in the strictest confidence, together with a detailed curriculum vitae should be sent to:-

Scaninvestment Services S.A.  
c/o H. E. Child, M.B.E.,  
Personnel Manager,  
Scandinavian Bank Ltd.,  
36 Leadenhall Street,  
London EC3A 1BH.

## A chance to make management capital out of your knowledge of

## Advanced Communications in the Banking World.

NCR — already ranked among the world's top three companies in terms of revenue from computers and associated products — has earned an unrivalled reputation for the development of specialist applications. And banking is one of our most successful areas.

In order to maximise the potential of the current market — and to lay the foundations of future expansion — we are now looking for an experienced man or woman with an in-depth knowledge of computerised systems within banks, who has the commercial acumen to lead our systems sales operations.

Based in London, and concentrating mainly on the City, you will be responsible for supervising and advising sales teams selling our terminal, mainframe and communications systems to major banks.

We can offer you on target earnings of around £11,000. (By on target earnings we mean the very least you should earn in your first year of operation — most people earn a great deal more). A full range of benefits will include a Company car.

Please write for an application form giving brief career details, to:-  
Ann Winter, our Personnel Manager, NCR Limited, 206 Marylebone Road,  
London NW1 6LY or telephone her on 01-723 7070.

**NCR**

Complete computer systems

City

c £10,000 + car

## FINANCE MANAGER

Late Twenties

The Client

A significant investor in shipping and real estate.

The Job

To join a small headquarters team engaged in identifying new investment opportunities world-wide. Reporting to the Group Chief Executive, responsibility will be for all aspects of financial and management accounting, including the preparation of consolidated accounts. The man or woman appointed will also provide support to the Group Chief Executive on project appraisal and company secretarial work. Some overseas travel will be necessary, and the base may well move to Monaco within 2 to 3 years.

The Candidate

A qualified accountant, aged up to 30. Post qualification experience could have been gained in the audit or investigation department of a major accounting firm, in a merchant bank, or as a financial accountant at the headquarters of a group of companies.

Brief but comprehensive details of career and salary to date which will be treated in confidence, should be sent to E. H. Simpson, Executive Selection Division, Ref. SF789, at the address below. Please include a daytime telephone number at which you may be contacted.

**COOPERS & LYBRAND ASSOCIATES LTD.**

Management Consultants  
Shelley House, Noble Street, London, EC2V 2DQ.

## Kemp-Gee & Co.

Members of The Stock Exchange

are seeking an

## INSTITUTIONAL GILT-EDGE EXECUTIVE

To help in expanding Kemp-Gee's client coverage in the market for Government Securities. A relevant professional qualification would be useful but the principal requirements are experience in and knowledge of the market and the ability to get on with professional fund managers. The position is an important one and the remuneration, including profit-sharing, will be competitive.

Please write, in confidence, to:

A. M. Williams, Esq., Gilt-Edge Partner, Kemp-Gee & Co.,  
20, Copthall Avenue, London, EC2R 7JS



## Pensions Manager

Self-administered Schemes  
c.£11,000 plus car & benefits  
South of England

For a prominent UK industrial group with overseas interests, having schemes for over 13,000 personnel in management, staff and operative grades. The appointed Manager will report to the Group Personnel Administration Manager, be responsible for planning and formulating the pensions policy, control the total administrative function with a staff of 12 and liaise with the funds' professional investment and technical advisers. Candidates (men and women) should ideally be professionally qualified and have at least five years' pensions management experience, probably gained at Deputy level in industry. Particular interest will be shown in candidates who include strength in departmental leadership. Age guide, late 30s/40s. Reference 148.

Please write, or telephone 01-499 2215 in confidence.

**Philip Egerton & Associates**

Selection Consultants

178-179 Piccadilly, London W1V 0QP

## Manager Finance & Administration

Red Sea Area

c. £14,000

For a major international corporation at its Red Sea Area office.

Reporting to the area manager, the position carries responsibility for the finance function, including comprehensive management accounting and budgetary control, as well as for office administration. Some local travel is involved.

Candidates, aged at least 28, and preferably single, should have a recognised accounting qualification. They should be self starters, with a commonsense approach, and with proven experience in accounting management.

For an application form, write in confidence showing how you meet the specification and quoting reference 2364/T, to J. H. Cobb,



Peat, Marwick, Mitchell & Co.,  
Management Consultants,  
Executive Selection Division,  
165 Queen Victoria Street,  
Blackfriars, London, EC4V 3PD.

## DIRECTOR

### MICRO-COMPUTER DIVISION

EARNINGS PACKAGE c. £15,000

WITH FIVE-FIGURE BASIC SALARY

Plus Bonus Plus Car Plus Benefits Plus Plus  
A highly successful, rapidly expanding and profitable systems company requires someone of the highest calibre to fill this new and top-level position. The company forms part of a substantial, well established, computer oriented group of companies, has considerable backing from that source and is staffed by strongly motivated, highly competent and ambitious professionals.

Applicants must be able to negotiate at the highest levels from both commercial and technical standpoints. They must also have extensive front line experience in mini-computers and have a well proven management track record in computer systems generally.

Salary as above, plus all usual big company extras.

Replies with curriculum vitae to:

Maidment Posner Consultants,  
78 Wimpole Street,  
London W1.  
Reference 582

## INTERNATIONAL BANKING

CORPORATE LIAISON OFFICER

The London subsidiary of one of Europe's leading International Banks wishes to appoint a Corporate Liaison Officer to service the short-term banking requirements of its growing list of UK and international corporate clients.

The work involves a high degree of personal contact coupled with a sound knowledge of short-term financing techniques both in sterling and foreign currency. The candidate should also demonstrate an ability to converse freely on foreign exchange and allied matters.

An attractive salary and a full range of benefits are offered reflecting the importance of the position.

Applications with curriculum vitae should be sent to Box A.6721, Financial Times, 10, Cannon Street, EC4P 4BY.

## LEASING EXECUTIVE

An opportunity exists with an International Bank for an individual with a leasing and financial background to develop the Bank's existing leasing activities both domestically and internationally.

A legal, financial or numerate qualification is desirable although not essential.

The remuneration package includes the usual fringe benefits associated with banking employment.

Interested candidates should provide a handwritten letter and full curriculum vitae to:-

Mr. Michael Gibbs,  
LONDON & CONTINENTAL BANKERS LTD.,  
2, Throgmorton Avenue, London, EC2N 2AP.

هكذا من العمل

The Consultants for Trade and Industry (CTI), one of Sweden's leading management consultancies, has been commissioned to assist in the establishment and development of a national technical and economic consulting body for Tanzanian industry — the Tanzania Industrial Studies and Consulting Organisation (TISCO). The assignment, now in its third year, includes direct participation of expatriates in the operation of TISCO as well as on the job training of Tanzanian counterparts. At this stage the TISCO operations are mainly concerned with pre-feasibility and feasibility studies related to industrial development in Tanzania. Three additional consultants are now sought to join the international team already established in Dar es Salaam.

## Senior Management Consultant £12,000 pa tax free

The main responsibilities of the Senior Management Consultant are to form working teams for techno-economic studies, as well as to participate in various TISCO assignments with a special emphasis on policy, management and organisational aspects. Additionally, he will be required to evaluate industrial projects from a management and organisational standpoint and to formulate programmes for resolving potential problem areas.

A degree is essential and preference will be given to those candidates with an MBA or post-graduate studies in management-orientated subjects. Varied and practical experience of general management at an international level is a necessary requirement and this experience should be both in industry and consultancy.

## Senior Consultant Industrial Financing and Investment

£12,000 pa tax free

The Senior Financial Consultant will review and analyse the financial requirements for the development of Tanzanian industry. This role will include assessing the potential availability of investment resources both inside and outside the country and the person appointed will participate in the mobilisation of these resources for specific industrial ventures. The consultant will be called upon for advice on financing options and on investment costs and practices. Candidates should have an academic qualification in Accountancy and Economics and preferably have followed a post-graduate course in Industrial Economics or related subject. It is expected that the successful candidate will come from the field of international banking and that he will have had specific experience in project financing and investment procedures.

## Industrial Economist

£12,000 pa tax free

The principal role of the Senior Consultant Industrial Economist will be to participate in feasibility studies by evaluating and advising on the viability of industrial projects in terms of rates of return and financing.

This post calls for a graduate in Economics or a related subject with extensive practical experience from economic and financial analysis of industrial projects.

All candidates should have an appreciation of both the fundamentals of industrial project development and of the contextual elements such as regional development and industrial sector development; first-hand knowledge of the Third World would be an advantage.

For each of these posts the initial contract with CTI will be for 2 years and the salary will be £12,000 pa tax free. The full remuneration package will include free housing, six weeks leave per year, vacation travelling expenses for self and family, school fees either in Tanzania or the UK for dependent children, medical insurance and other allowances and expenses; residential base will be Dar es Salaam.

Please send comprehensive career details in strictest confidence to:

Anbrey Wilson Associates (Ref: CTI), 2nd Floor, 28 Holborn Viaduct, London EC1.

Preliminary interviews will be conducted in London by CTI's representative.

**cti**

The Consultants for Trade and Industry

Saudia, flag carrier of the Kingdom of Saudi Arabia, has a vacancy, based in Jeddah, for

## MANAGER-TAXES Starting Salary £14,000 p.a. Tax Free

The successful applicant for this position will be responsible for the complete administration of all taxes incurred by the Airline both within Saudi Arabia and abroad, negotiating with government officials as necessary and representing the Airline at conferences and hearings. Duties will also include: ensuring that tax returns, accounting data and financial statements are submitted on time to the individual tax authorities, to conduct a comprehensive study of the tax laws and regulations of countries where Saudia employ personnel, to ensure conformity with the local laws i.e. social insurance, family benefits, expenses, allowances etc.

Applicants should have at least 6 years previous related experience and possess a Degree in either Mathematics or Accounting, and have a Finance, Legal or Administration background preferably gained with an airline.

This post, open to men between the ages of 25-45, is offered on a two year renewable contract, together with free accommodation, free and reduced rate air tickets for you and your family, 40 calendar days vacation, plus relocation allowance.

Please write giving full personal and career details, quoting job title and department number to:

Area Personnel Manager-Europe,  
Department 144/2,  
Saudi Arabian Airlines,  
508/510, Chiswick High Road,  
London W4 6SQ.  
Closing date: 21st April, 1979



## Head of Budgets and Plans

East Midlands £12-14,000

A key public group in a manufacturing process industry, with a multi-million pound turnover, seeks an experienced executive to develop its planning and budgetary functions. The company is entering a phase of expansion and appropriate systems support is needed to underpin future growth.

The role encompasses both the introduction of a modern budgetary control and planning system and the building of a competent team to operate it. Management skills are a key element.

Candidates aged 30-42 should be business graduates, or professionally qualified, and have an outstanding record of achievement in operating planning and budgetary control systems with experience of financial analysis. This practical experience should have been gained in a large company environment, preferably within the chemical process industry. They should be capable of earning and maintaining the confidence of all levels of management through their ability and judgement.

Please write in complete confidence, quoting ref 1031, to: Michael Waggett, who is advising on this appointment.

**Odgers**

MANAGEMENT CONSULTANTS  
Odgers and Co Ltd, One Old Bond St.,  
London W1X 7TD 01-499 8811



## Experience in Commerce or Accounting? Earn up to £7,500 as a Specialist in INSOLVENCY

If you have the ability to cope with the problems of businesses in financial difficulties with energy and style, contact us now. We are Thornton Baker, a national firm of chartered accountants, and need more Senior in our expanding insolvency departments, which deal with a wide range of special work as well as receiverships and liquidations.

**You must** be able to communicate effectively with businessmen, their bankers and solicitors, together with fellow professionals, and show initiative in making commercially rational decisions in stress situations. Previous experience of this work would be an advantage, but is less important than enterprise, ambition and the will to succeed. You will be a qualified accountant or will have experience in the commercial or professional field.

**We offer** in return programmed professional development, including specialist and general in-house courses, early responsibility and real involvement in the technical and administrative development of the practice. Progression is limited only by your own ability, and

salaries offered are very competitive in a range up to £7,500 depending on location.

**Thornton Baker** has offices in nearly every major centre throughout the U.K., and can therefore give you an unrivalled breadth of experience and range of opportunity. Whichever of our offices you work from, you will find the highest level of standards, constantly under review. Courses in the ideal atmosphere of our own residential training centre, Bradenham Manor near High Wycombe, will help you to maintain them.

**Interested?** Then pick up a phone and ring one of the specialist partners shown below:-

<b>London</b> Maurice Withall or Nick Lyle 01-405 8422	<b>Bedford</b> Robert Buller 0234 211521	<b>Brighton</b> Peter Braine 0273 778955	<b>Bristol</b> David Bird 0272 28901
	<b>Liverpool</b> David Rowlands 051-227 4211	<b>Manchester</b> Robert Hayton 061-834 5414	<b>Newcastle</b> Ian Turner 0632 612631

## Policies and Procedures Coordinator-Libya

Salary c.£16,600 p.a. plus allowances 'Tax Free'

Occidental of Libya, Inc., one of the world's most progressive multinational oil companies, have established a new position in Tripoli.

Our Policies and Procedures Coordinator will be required to develop, update and distribute various company policy manuals. The Coordinator will report to the Audit Manager, in Tripoli but much of the work will be requested by operational departments under the guidance of the Management Committee.

Areas will arise where the Coordinator will initiate procedural improvements in liaison with individual departments. This person must be able to communicate adequately with all levels of Management with a high degree of resourcefulness and tact. A natural flair for writing concise, organised instructions is important.

We require applications from people with a degree in business administration or accountancy, plus three to six years in policies and procedure development. A knowledge of data processing/EDP systems will be an advantage.

We offer generous allowances for relocation, housing and education; Medical cover, by BUPA and of course airfare paid to point of origin for 30 days annual vacation.

Please telephone or write for an application form to Patricia Connolly, Occidental of Libya Recruiting Office, 16 Palace Street, London, SW1E 5BQ. 01-828 6600.

**OXYLIBYA**

## Group Financial Controller Up to £12,000

Chartered Accountant, minimum age 34 with at least 4 years experience of budgetary control and consolidation of annual accounts in an international group, preferably from the insurance broking field, required for a fast-growing British Transport Group. The Group has an annual turnover of £60 million from freight forwarding, road and rail transport and other allied services, out of activities spread across Europe.

Initial salary will be up to £12,000 per year plus company car and other benefits. The post is located in London E.C.2.

Write Box A6722, Financial Times, 10 Cannon Street, EC4P 4BY.

## Qualified Accountant £10,000 + Car

**INTERNATIONAL COMMUNICATIONS**  
Our company is expanding rapidly and now requires to appoint a suitably qualified and experienced accountant to act as

**THE CORPORATE FINANCIAL CONTROLLER AND MANAGEMENT ACCOUNTANT**

The emphasis will be on management and the successful applicant aged between 25/35 must have the following proven capability in reporting to the Managing Director:

1. To arrange for the smooth transition from manual to computerised accounting;
2. To co-ordinate international branch accounts;
3. To make a positive contribution to the company's continued expansion.

The successful applicant, in addition to salary, company car and other benefits, will be given the opportunity of participation in the company growth six months after appointment. All applications with full particulars in strictest confidence to Box A.6720, Financial Times, 10 Cannon Street, EC4P 4BY.

### QS BANKING RECRUITMENT

**CONSULTANTS**  
Deputy Chief Dealer to £14,000  
FX Dealer to £10,000  
ACA's to £7,000  
MBA's to £7,000  
Auditor to £5,000

We also wish to hear from young male and female Clearing Bankers wishing to develop their careers. Also Loans Admin. Accounts, FX Admin and Secretarial Staff.

Please apply Mike Pope  
236 0731  
30-31 Queen Street, EC4

### University of Bradford POSTGRADUATE SCHOOL OF YUGOSLAV STUDIES

Applications are invited from graduates or students about to graduate for places on the MA course in Yugoslav Studies one year taught course and dissertation and for MPhil or PhD by Research in Yugoslav Studies. Facilities also exist for part-time study by Research. The University is currently considering offering a part-time course in Yugoslav Studies. Interested candidates are invited to contact the School of Studies, University of Bradford, West Yorkshire, BD7 1DP.

### THE NATIONAL ASSOCIATION OF PENSION FUNDS (NAPF)

#### ASSOCIATION SECRETARY

Applications are invited from suitably qualified persons who will be:

- an excellent administrator
- an effective communicator, both written and verbal
- able to work within a Committee structure
- prepared to undertake a wide range of duties
- able to get along with most types of people

It is more important to have had experience of organising a body like NAPF than to possess a technical knowledge of pensions.

The NAPF, which has over 2,000 members:

- is the only body which represents the interests of all types of occupational pension arrangements in both the public and private sector
- makes representations to all relevant Government Departments
- organises regional, national and international conferences
- runs professional courses at all levels for those engaged in administration and investment work
- publishes a wide range of literature

The post is unlikely to attract a candidate currently earning less than £7,000 p.a.

Please send full details under "Personal and Confidential" cover to the present Secretary J. D. Cren, M.A., The National Association of Pension Funds, Prudential House, Wellesley Road, Troydon, CH5 5KY (Tel: 07-821 2077)

**napf**

## INTERNATIONAL AUDIT

Are you a young Chartered Accountant who would like to see something of Europe with a fast moving and progressive American company?

Would you like to join our International Audit team who are looking for young professionals at senior or assistant level? You will gain first hand experience of American management techniques and receive every opportunity to progress to line management within one or two years. 80% of your time will be spent abroad, sometimes working in small teams and sometimes alone.

As a highly successful and profit-orientated company we can offer an excellent salary and attractive benefits package including first class accommodation and generous living expenses whilst on assignment.

Please phone or send a detailed c.v. to Wanda Skinner, Manager - Recruitment and Benefits, Hertz Europe Limited, Isleworth House, Great West Road, Isleworth, Middlesex. Tel: 01-668 4422.



• THE No1 COMPANY

## Treasury Assistant

Willis Faber & Dumas, the leading international insurance brokers, are looking for a young person to assist with all aspects of cash management, investment and foreign exchange transactions.

It is anticipated that the successful applicant will become fully integrated into the Treasury Department and be capable of working independently without supervision. A high degree of numeracy is an essential requirement, together with experience and/or training in an economic or mathematical discipline. This position would suit a graduate.

Prospects are excellent. The appointment carries a generous salary, dependent on age and experience, and all the benefits associated with a large company.

Apply to Mrs. P. Fowler, Staff Department, at the address below or telephone her on 01-488 8282 (between 10 a.m.-4 p.m.).

**Willis Faber**

International Insurance and Reinsurance Brokers

Willis Faber & Dumas Ltd., Ten Trinity Square, London EC2P 3AX and in Leeds

### ACCOUNTANTS FOR BANKS

The Financial Accounts Controller of an Overseas Bank requires an Assistant with a degree in accountancy and/or banking background. Age 25-30. Salary £7,500.

### INTERNATIONAL BANK, CITY BRANCH

requires an Assistant to their Chief Accountant. Experience in Bank Management Accounts is necessary with a knowledge of Foreign, English, French, Italian, Spanish, German, Japanese and/or Chinese. Age 25-35. Salary £7,000.

### DOCUMENTARY CREDITS SUPERVISOR

A Supervisor is required for the Documentary Credits Department in a City branch of an overseas bank. Experience in all aspects of Documentary Credits is essential. Age 25-30. Salary £6,500.

### EUROBOND SETTLEMENTS

A Settlements Clerk with two years' experience in Eurobond settlements is being sought by an expanding International Finance Group. Salary will be discussed on the basis of experience and ability.

L.J.C. BANKING APPOINTMENTS, 283 9958/9

## EUROBOND

American bank seeks individual familiar with Eurobond market. Individual should have dealing, sales and back room knowledge. Ability to grow into position of increasing responsibility important.

Write Box A.6714, Financial Times, 10, Cannon Street, EC4P 4BY.

## SENIOR EXECUTIVES

If you are in the job market - we are here to help. Courts Careers provides:-

- \* Excellent job search assistance.
- \* A thorough knowledge of the job market.
- \* Contact with top recruitment.
- \* Confidential and expert counselling.
- \* Superb Secretarial back up.

Telephone now for a cost free assessment meeting.

**Percy COUTTS & Co.**

01-839 2271

140 Grand Buildings

Tring Square, London WC2

### ARE YOU LOOKING FOR

A new position in London or elsewhere in the UK?

### BEE PROFESSIONAL STAFF

who have many openings in commerce, industry and the professions for qualified, part-qualified and experienced accountants.

Telephone NOW 0273 20377

24-hour answering service.

### WANTED

### PURCHASING MANAGER

13 yrs. with U.S. multinational manufacturing companies, leaders in field of consumer products. Sanitary napkins, personal hygiene, baby products, liquid pastes, confectionery. Well acquainted systems and procedures. Vast knowledge of wrapping/packing materials and logistics. Fluent in English, French, Arabic, Spanish. Wish challenging job within Europe, Greece or Middle East.

Write Box G 2579 Financial Times, 10, Cannon Street, EC4P 4BY.

ECONOMICS GRADUATE with 3 years experience in Commodity Trading seeks stimulating post in London or abroad. Rms. 01-761-6156

## Materials Manager Electronics

over £10,000+ car

To co-ordinate materials supply and stock control for a multi million pound manufacturing operation employing computer control techniques.

You will have several years, experience in production control (ideally electronic/light mechanical

assembly), at least two years as a manager; you will be the man or woman who supervises well over a hundred people.

Preferred Age: 30-45

Location: South of England.

Interviews will be held in Central London before Easter.

Please write today with full CV or better still telephone the consultant advising on this appointment:

Trevor B. Lee, Managing Director, Executive Projects Limited, Shears House, 995 High Road, London N12 8QX. Tel: 01-204 0862

## Experienced Arbitrageur Foreign Exchange Dealer Trainee U.K. Institutional Sales Executive

A leading firm of stockbrokers has vacancies for the above positions. Salaries commensurate with experience.

Please write Box A6723, Financial Times, 10 Cannon Street, EC4P 4BY.

## RETAIL ANALYST

Stockbroking outside London

We are a major provincial firm looking for a bright young analyst to join our expanding institutional team. The firm already has a successful specialisation in the retail sector and the analyst will work closely with the partner concerned, covering both food and non-food retailers. The successful applicant will be able to express him/herself convincingly and with originality and will be sufficiently knowledgeable and personable to attend meetings with senior management of companies. The post could well appeal to someone wishing to escape from the inconvenience and high cost of working in the City. Our team already includes two successful analysts now enjoying the better quality of life which we believe the provinces can offer. Salary and bonus will be fully competitive. Preferred age 25-35. Apply in confidence to: The Research Partner, Tilney & Co., 385, Sefton House, Exchange Buildings, Liverpool, L3 2NT.

## King's College London University of London Appointment of Principal

The Principal of King's College, Sir Richard Way, KCB, CBE, is due to retire on 31st July, 1980. It is intended that a successor will be appointed from 1st August, 1980.

The Principal is the chief academic and administrative officer of the College.

The salary is negotiable and living accommodation is provided. Persons interested in being considered for this appointment, or wishing to suggest names, are invited to write in confidence not later than 23rd April, 1979, to the Chairman of the Delegation, the Rt. Hon. Earl Jellicoe, DSO, MC, at King's College, London, Strand, London, WC2R 2LS, from whom further particulars are available.

## Thames Polytechnic

School of Surveying

### Head-Grade V

Salary: £9,117-£10,077 inclusive

The Headship falls vacant in September 1979. The School offers full-time degree and part-time professional courses in estate management, quantity surveying and building surveying. This is a demanding post and the Polytechnic is looking for a new head with wide experience in education and the profession, and with proven ability to appreciate the present opportunities and to lead the School successfully into the 1980s. Further particulars and form of application may be obtained from the Staffing Officer, Thames Polytechnic, Wellington Street, London SE18 6PF to whom completed applications should be returned by 20 April 1979.

### IS YOUTH ON YOUR SIDE?

10K + Profit Sharing

ACA the qualification, Financial accountants the designation, 10K the remuneration and Kent the place for relocation. Write to Contact Judi Ann Roscoe on 828 8005.

01-828 8055

Chartered Personnel Consultants

Adrian House, 15 Wilson Road, London SW1V 1LE

## SECRETARIAL APPOINTMENTS

### TO £5,000

### KNIGHTSBRIDGE

Proposed by a S.W.S. requires a Secretary/PA for their Financial Director. Good shorthand/typing is required (120/80) with a flair for organization and administration. If you are 25+ with director level experience, please ring Beverly Gunn on 581 0000.

JB PERSONNEL LIMITED, Recruitment Consultants.

## £6,000 accountancy appointments £9,000

These appointments appeared in the Financial Times on 27th March. For full details see the F.T. of that date or alternatively telephone Julie Burgess on 01-248 800 Ext. 526.

JOB TITLE	SALARY	LOCATION	ADVERTISER
Management Accountant	c£9,000 + Car	Warwickshire	London Brick Bldgs. Ltd.
Management Accountants or Financial Analysts	£6,500-£9,000 + Benefits	London	Cadbury Schweppes
Group Accountant	£7,000 + £8,000	London	H.S.D. & Co. Churchill Personnel
Supervisor Financial Accounting	£8,000-£10,000	London	Accountancy Personnel
Accountants and Financial Control	c£7,000	Home Counties	Kearley & Tonge Ltd.
Financial Controller	+ Car c£6,500 + Car	Kent	New Appointments Grp.
Young Finance Manager	£7,500	London	Periton Travel
Chief Accountant	£7,500 + Benefits	London	Extel Group
Young Chartered Accountant	Neg.	Surrey	The Rank Organisation
Taxation Accountant	£6,000 + Comm.	London	Dunlop & Badenoch Ltd.
Recruitment Consultant	c£9,000	London	Prime Appointments
Qualified Accountant	£7,276	London	British Gas
Internal Auditors	£6,000	Romford	Clemence Hoar Cummings
A.C.A.	c£6,500	West End	Saltraco Holdings Ltd.
Qualified Accountant or Finalist	£7,000	Sussex	Eustace & Partners Ltd.
Group Accountant	£6,500	West End	F.T. Box A.6716
Accountant	£8,000	London	Personnel Resources Ltd.
Financial Accountant	c£8,500 + Car	Middlesex	Personnel Resources Ltd.
Finance Director Designate	c£7,250 + Car	W. London	David Clark Associates
Young Chartered Accountant	Neg.	London	Garage Group







## LOMBARD

## Convinced losers tend to lose

BY NICHOLAS COLCHESTER

How many executives, on being awarded an unexpected pay rise, would protest bitterly that their new salary level had made them marginally less employable? Only the chronically insecure. It is, by analogy, perhaps time that Britain faced up to the challenge of being a strong currency nation for a period. Convinced losers tend to lose.

It is perfectly valid to point out that the current strength of sterling has very little to do with a new dynamism in British industry. It is almost exclusively the result of Britain's increasing self-sufficiency in oil and the increasing value of this self-sufficiency as the world oil price rises.

What is questionable is that a dose of artificially high exchange rate does British industry harm. It can be argued that it makes British industry adapt to pressures which it should earnestly hope, in time, to face anyway. Wishful thinking, you may say, but surely equivalent to the hope that monetary stringency will somehow prove an antidote to stagnant productivity and prodigality on the wages front.

The point of the table below is that there is no pattern to it at all. The OECD figures show that the value of exports of three strong currency countries have gone up by three quarters since 1970 while the trade weighted value of their currencies has soared. Meanwhile the

% increase in exports	% change in value of currencies
1970-78	rate 1978-79
Germany	87
Japan	108
Switzerland	58
UK	61
Italy	72

exports of two countries whose currency values have halved have grown by two thirds. The extensive divergence between the currency values of the two groups of countries has not led to a divergence of export performance.

The keep-sterling-weak camp would argue that exchange rates have adjusted, quite logically, to different rates of inflation, and that without this adjustment British exports would never have grown as much as they have. The strong currency

camp would argue that currency strength—and in particular those periods when hard currencies have been "overvalued" by reference to shopping baskets, productivity of labour, and other measures of international competitiveness—have forced industry to invest in higher productivity, shift to wards high value products, and capitalise on the extraordinary price inelasticity which high value products can exhibit.

The NEDC produced a thought-provoking analysis of export price competitiveness in 1977. One of its findings was that in 1974 a ton of German mining equipment and construction machinery was selling on the international market at 2.3 times the price of a ton of British equipment. German telecommunications equipment was selling at 2.2 times the price of the British equivalent. German machine tools cost twice as much per ton. The list of German price premiums stretched right down to hosiery and knitwear, where, it would seem, elasticity reassured itself.

## Sophisticated

It may be that the average ton of German earthmover is more sophisticated than the British ton. But it is difficult to believe that price difference of this magnitude were only due to the technical superiority of German products.

Yet it is part of the British weak currency mentality that we must compensate for an inability (in certain products) to deliver on time with a price discount to encourage the customer to wait. This is a perverse sort of realism involving a fatalistic acceptance, rather than increased pressure to solve, the underlying problem.

Britain's outward exchange controls are another example of a long-injunctured attitude towards the sterling exchange rate. They should be abandoned not in the hope that this will cause the currency to falter, but to embrace the prospect that it will not. Just as Switzerland signalled recently that the days of the Swiss franc appreciation were over by removing inward exchange controls, so the UK should signal that the days of sterling's decline are over by removing the outward ones.

TYING a knot in a piece of string which is stretched taut between two fixed points is one of the parapsychological feats alleged to show that there are things between heaven and earth which escape the understanding of the scientific mind. Even more impressive, however, seems to be the untangling of the legal knots which can emanate from disputes connected with commodity futures. Dealers in these markets, at any one time, can find themselves involved in a "string" of seemingly interdependent contracts in which the physical commodity may never actually change hands.

## Remarkable

Since the U.S. embargo on the export of commodities affected by the flooding of the Mississippi River in 1973, Mr. Justice Robert Goff seems to have become a past master of this transcendental and metaphysical art. One of his more remarkable feats was reported here only on February 22, but his latest judgment makes it necessary to return to the subject again.

This concerns the arbitration between a New York seller and a London buyer of soy beans which were to be shipped in June 1973 from a port on the Mississippi River. Mr. Justice Goff had already decided the principal legal issues of this dispute

on November 30, 1978 but it was only this month that he finally decided that the sellers had lost on points. They were ordered to pay the buyers US\$374,502.40 for defaulting on their contract, and in addition one-half of the legal costs incurred by the buyers.

In the case of arbitration between Avipex and Dewulf reported here on February 22 the subject of the contract was soy bean meal and the contract incorporated the terms of GAFTA 100 (a standard contract of the Grain and Feed Trade Association). As the present dispute concerns soy beans, the contract incorporated the terms of FOSFA 24 (a standard contract of the Federation of Oil Seeds and Fats Association). The main difference here is that while the GAFTA contract contains a force majeure clause, the FOSFA 24 contract contains only a "prohibition" clause. That is, the seller is excused if he cannot deliver because the shipment was prohibited by government.

Under the GAFTA 100 force majeure clause it is only necessary for the seller to show that the goods intended for delivery under the contract were affected by an act of God or government.

Clause 23 of FOSFA 24 provides simply that "Should the fulfilment of this contract be rendered impossible by prohibi-

tion of export... this contract is to be cancelled. The judge took the view that the same conclusion should be reached on this clause as was reached by the Court of Appeal and the House of Lords in the Bremer Handel case concerning clause 21 of GAFTA 100, namely that "fulfilment is prevented when the performance of any part is rendered impossible, but that the clause operates only to

## BUSINESS AND THE COURTS

BY A. H. HERMANN, Legal Correspondent

cancel the contract to the extent that performance is rendered impossible."

The judge held that unlike the force majeure clause of GAFTA the prohibition clause of FOSFA did not require the seller to prove that they would have been able to perform the contract had they not been prohibited by the Government; from doing so. The sellers were therefore not obliged to prove that they actually bought the goods which they undertook to supply. They won this point but not the case.

However, the sellers had to jump over yet another hurdle. They had still to prove that the fulfilment of the contract was rendered impossible by showing

without necessarily covering themselves for all their sales. They may go long or short for any particular delivery period, depending on what gamble they take on the movement of prices. Even if they are covered, it is impossible to say which of their purchase contracts is intended for any particular sale. The contract will crystallise only after notices of appropriation have been passed down a chain of traders.

Bearing this in mind, Mr. Justice Goff reached the conclusion that it is impossible for such a seller to discharge the burden of proof by pointing out a particular purchase contract as intended to cover the sale con-

tract under dispute. Instead, the seller invoking a prohibition clause of the FOSFA 24 type has to prove, first, that no goods were already available to him to fulfil his contract and, second, that he could not obtain any such goods by means reasonably open to him after the prohibition was made.

This test, said the Judge, has to be applied whether or not the seller is "in string." The task is much more difficult for a seller in a "string" which consists sometimes of a chain of up to forty dealers, not all of whom are linked by identical contracts. In attempting the proof that he should benefit from the prohibition clause, such a dealer has therefore to show what goods were in fact available to him and how he has disposed of them. If he used such goods to fulfil a contract made at a higher price after the export prohibition, such allocation would be deemed unreasonable. In this particular case the seller came unstuck by their inability to prove that none of the goods intended for the disputed contract passed through the U.S. embargo loopholes and were therefore not available to them for delivery.

This short summary of the decision sheds over a number of issues dealt with in the judgment, fascinating the commodity lawyer though not necessarily the rest of mankind. It seems to me, however, that a wider issue of general interest is implied in

such disputes. This is the question of whether commodity futures of this type should be treated as real contracts of sale. The commodity trade is a mixture of deals necessary for the supply of consumers and of deals which in essence are not supply contracts but bets on the movement of commodity prices.

If these two types of commodity deals, the supply on one hand and the gambling on the other, could be separated, litigation of disputes would become simpler. It is even possible that the shortening of the real chains of supply would eliminate an inflationary factor from the economy. If, as the commodity trade no doubt believes, the present arrangements do not push prices up, the separation of dealing and gambling could help them to prove the case.

In the aftermath of the First World War, when commodity prices rocketed, to describe someone as a "chain dealer" was in some countries tantamount to an invitation to lynching. In an otherwise society people seem to be less extensible. Nevertheless, a fresh look at the commodity trade might prove useful to consumers and traders alike.

\*Archer and Dewulf (FT, February 22, 1979). \*Queen's Bench Division. Re arbitration between Continental Grain Export Corporation and S.T.M. Grain Corporation.

## Double Negative misses Topham for National

A GRAND NATIONAL field of 37 or 38 runners now seems probable, with question-marks against only Spartan Missile and Wagner from the 39 declared at Tuesday's four-day declaration stage.

To many people's surprise Double Negative, a faller at

seems to have his best chance of another victory in the 11-year-old The Pilgrimage, one of 20 runners set to carry 10 st.

A heavy ground specialist who won some good races in Ireland before joining Remell, The Pilgrimage seems to have come to hand at exactly the right time. Five weeks ago at Stratford, the Royal Buck gelding gave Mr. Woods an armchair ride when trying with Stormbound at level weights.

Royal Frolic and Godfrey Secundus are the other two who will be representing Kinnear's. The former, carrying a top weight of 11 st 10 lb is nowhere near the force he was a few reasons back when he lifted the Cheltenham Gold Cup. Godfrey Secundus, however, a respectable third behind Spartan Missile at this year's Festival meeting, would prefer firmer ground.

In spite of the fact that only

four clear favourites have won the century, punters continue to back Alford to follow his Gold Cup victory. Down to 6 to 1 in most lists, Jonjo O'Neill's mount can hardly be described as value at present odds, in view of the fact that

LIVERPOOL  
2.00-Mellon\*\*\*  
2.25-Artic Ale  
2.10-Vaguely Attractive  
3.45-Boothaces\*\*  
4.20-Spartan Missile  
4.20-Lighter\*

only 25 per cent of the starters are likely to be lucky enough—let alone good enough—to complete the 41-mile course. William Hill, betting on the number of finishes make 10-14 inclusive the favourite at odds. Fifteen completed the course last year and Hill's price the 15-100 to 1 at 2 to 1. Odds of 20-1 to 1 are available on 0-4 finishes.

## RACING

BY DOMINIC WIGAN

Valentine's on the first circuit a year ago, joins three other Fred Rimell runners instead of challenging for this afternoon's Topham Trophy.

On Saturday, Double Negative is likely to carry 4 or 5 lb overweight in the Colt Car-sponsored National, since amateur rider Mr. Eddie Woods will be unable to make the allotted 10 st 1 lb. Rimell, already responsible

11.00 Barnaby Jones  
11.55 By-Election Special  
12.45 Close: A painting by El Greco with music by Juan Martin

All 18 Regions as London except at the following times—

ANGLIA  
1.25 pm BBC 2 3.50 Give Us A Cue. 4.30 The New Wave Show. 4.45 The Beachcombers. 5.15 Emma. 5.30 The New Wave Show. 5.45 The New Wave Show. 6.00 The New Wave Show. 6.15 The New Wave Show. 6.30 The New Wave Show. 6.45 The New Wave Show. 7.00 The New Wave Show. 7.15 The New Wave Show. 7.30 The New Wave Show. 7.45 The New Wave Show. 8.00 The New Wave Show. 8.15 The New Wave Show. 8.30 The New Wave Show. 8.45 The New Wave Show. 9.00 The New Wave Show. 9.15 The New Wave Show. 9.30 The New Wave Show. 9.45 The New Wave Show. 10.00 The New Wave Show. 10.15 The New Wave Show. 10.30 The New Wave Show. 10.45 The New Wave Show. 11.00 The New Wave Show. 11.15 The New Wave Show. 11.30 The New Wave Show. 11.45 The New Wave Show. 12.00 The New Wave Show. 12.15 The New Wave Show. 12.30 The New Wave Show. 12.45 The New Wave Show. 1.00 The New Wave Show. 1.15 The New Wave Show. 1.30 The New Wave Show. 1.45 The New Wave Show. 2.00 The New Wave Show. 2.15 The New Wave Show. 2.30 The New Wave Show. 2.45 The New Wave Show. 3.00 The New Wave Show. 3.15 The New Wave Show. 3.30 The New Wave Show. 3.45 The New Wave Show. 4.00 The New Wave Show. 4.15 The New Wave Show. 4.30 The New Wave Show. 4.45 The New Wave Show. 5.00 The New Wave Show. 5.15 The New Wave Show. 5.30 The New Wave Show. 5.45 The New Wave Show. 6.00 The New Wave Show. 6.15 The New Wave Show. 6.30 The New Wave Show. 6.45 The New Wave Show. 7.00 The New Wave Show. 7.15 The New Wave Show. 7.30 The New Wave Show. 7.45 The New Wave Show. 8.00 The New Wave Show. 8.15 The New Wave Show. 8.30 The New Wave Show. 8.45 The New Wave Show. 9.00 The New Wave Show. 9.15 The New Wave Show. 9.30 The New Wave Show. 9.45 The New Wave Show. 10.00 The New Wave Show. 10.15 The New Wave Show. 10.30 The New Wave Show. 10.45 The New Wave Show. 11.00 The New Wave Show. 11.15 The New Wave Show. 11.30 The New Wave Show. 11.45 The New Wave Show. 12.00 The New Wave Show. 12.15 The New Wave Show. 12.30 The New Wave Show. 12.45 The New Wave Show. 1.00 The New Wave Show. 1.15 The New Wave Show. 1.30 The New Wave Show. 1.45 The New Wave Show. 2.00 The New Wave Show. 2.15 The New Wave Show. 2.30 The New Wave Show. 2.45 The New Wave Show. 3.00 The New Wave Show. 3.15 The New Wave Show. 3.30 The New Wave Show. 3.45 The New Wave Show. 4.00 The New Wave Show. 4.15 The New Wave Show. 4.30 The New Wave Show. 4.45 The New Wave Show. 5.00 The New Wave Show. 5.15 The New Wave Show. 5.30 The New Wave Show. 5.45 The New Wave Show. 6.00 The New Wave Show. 6.15 The New Wave Show. 6.30 The New Wave Show. 6.45 The New Wave Show. 7.00 The New Wave Show. 7.15 The New Wave Show. 7.30 The New Wave Show. 7.45 The New Wave Show. 8.00 The New Wave Show. 8.15 The New Wave Show. 8.30 The New Wave Show. 8.45 The New Wave Show. 9.00 The New Wave Show. 9.15 The New Wave Show. 9.30 The New Wave Show. 9.45 The New Wave Show. 10.00 The New Wave Show. 10.15 The New Wave Show. 10.30 The New Wave Show. 10.45 The New Wave Show. 11.00 The New Wave Show. 11.15 The New Wave Show. 11.30 The New Wave Show. 11.45 The New Wave Show. 12.00 The New Wave Show. 12.15 The New Wave Show. 12.30 The New Wave Show. 12.45 The New Wave Show. 1.00 The New Wave Show. 1.15 The New Wave Show. 1.30 The New Wave Show. 1.45 The New Wave Show. 2.00 The New Wave Show. 2.15 The New Wave Show. 2.30 The New Wave Show. 2.45 The New Wave Show. 3.00 The New Wave Show. 3.15 The New Wave Show. 3.30 The New Wave Show. 3.45 The New Wave Show. 4.00 The New Wave Show. 4.15 The New Wave Show. 4.30 The New Wave Show. 4.45 The New Wave Show. 5.00 The New Wave Show. 5.15 The New Wave Show. 5.30 The New Wave Show. 5.45 The New Wave Show. 6.00 The New Wave Show. 6.15 The New Wave Show. 6.30 The New Wave Show. 6.45 The New Wave Show. 7.00 The New Wave Show. 7.15 The New Wave Show. 7.30 The New Wave Show. 7.45 The New Wave Show. 8.00 The New Wave Show. 8.15 The New Wave Show. 8.30 The New Wave Show. 8.45 The New Wave Show. 9.00 The New Wave Show. 9.15 The New Wave Show. 9.30 The New Wave Show. 9.45 The New Wave Show. 10.00 The New Wave Show. 10.15 The New Wave Show. 10.30 The New Wave Show. 10.45 The New Wave Show. 11.00 The New Wave Show. 11.15 The New Wave Show. 11.30 The New Wave Show. 11.45 The New Wave Show. 12.00 The New Wave Show. 12.15 The New Wave Show. 12.30 The New Wave Show. 12.45 The New Wave Show. 1.00 The New Wave Show. 1.15 The New Wave Show. 1.30 The New Wave Show. 1.45 The New Wave Show. 2.00 The New Wave Show. 2.15 The New Wave Show. 2.30 The New Wave Show. 2.45 The New Wave Show. 3.00 The New Wave Show. 3.15 The New Wave Show. 3.30 The New Wave Show. 3.45 The New Wave Show. 4.00 The New Wave Show. 4.15 The New Wave Show. 4.30 The New Wave Show. 4.45 The New Wave Show. 5.00 The New Wave Show. 5.15 The New Wave Show. 5.30 The New Wave Show. 5.45 The New Wave Show. 6.00 The New Wave Show. 6.15 The New Wave Show. 6.30 The New Wave Show. 6.45 The New Wave Show. 7.00 The New Wave Show. 7.15 The New Wave Show. 7.30 The New Wave Show. 7.45 The New Wave Show. 8.00 The New Wave Show. 8.15 The New Wave Show. 8.30 The New Wave Show. 8.45 The New Wave Show. 9.00 The New Wave Show. 9.15 The New Wave Show. 9.30 The New Wave Show. 9.45 The New Wave Show. 10.00 The New Wave Show. 10.15 The New Wave Show. 10.30 The New Wave Show. 10.45 The New Wave Show. 11.00 The New Wave Show. 11.15 The New Wave Show. 11.30 The New Wave Show. 11.45 The New Wave Show. 12.00 The New Wave Show. 12.15 The New Wave Show. 12.30 The New Wave Show. 12.45 The New Wave Show. 1.00 The New Wave Show. 1.15 The New Wave Show. 1.30 The New Wave Show. 1.45 The New Wave Show. 2.00 The New Wave Show. 2.15 The New Wave Show. 2.30 The New Wave Show. 2.45 The New Wave Show. 3.00 The New Wave Show. 3.15 The New Wave Show. 3.30 The New Wave Show. 3.45 The New Wave Show. 4.00 The New Wave Show. 4.15 The New Wave Show. 4.30 The New Wave Show. 4.45 The New Wave Show. 5.00 The New Wave Show. 5.15 The New Wave Show. 5.30 The New Wave Show. 5.45 The New Wave Show. 6.00 The New Wave Show. 6.15 The New Wave Show. 6.30 The New Wave Show. 6.45 The New Wave Show. 7.00 The New Wave Show. 7.15 The New Wave Show. 7.30 The New Wave Show. 7.45 The New Wave Show. 8.00 The New Wave Show. 8.15 The New Wave Show. 8.30 The New Wave Show. 8.45 The New Wave Show. 9.00 The New Wave Show. 9.15 The New Wave Show. 9.30 The New Wave Show. 9.45 The New Wave Show. 10.00 The New Wave Show. 10.15 The New Wave Show. 10.30 The New Wave Show. 10.45 The New Wave Show. 11.00 The New Wave Show. 11.15 The New Wave Show. 11.30 The New Wave Show. 11.45 The New Wave Show. 12.00 The New Wave Show. 12.15 The New Wave Show. 12.30 The New Wave Show. 12.45 The New Wave Show. 1.00 The New Wave Show. 1.15 The New Wave Show. 1.30 The New Wave Show. 1.45 The New Wave Show. 2.00 The New Wave Show. 2.15 The New Wave Show. 2.30 The New Wave Show. 2.45 The New Wave Show. 3.00 The New Wave Show. 3.15 The New Wave Show. 3.30 The New Wave Show. 3.45 The New Wave Show. 4.00 The New Wave Show. 4.15 The New Wave Show. 4.30 The New Wave Show. 4.45 The New Wave Show. 5.00 The New Wave Show. 5.15 The New Wave Show. 5.30 The New Wave Show. 5.45 The New Wave Show. 6.00 The New Wave Show. 6.15 The New Wave Show. 6.30 The New Wave Show. 6.45 The New Wave Show. 7.00 The New Wave Show. 7.15 The New Wave Show. 7.30 The New Wave Show. 7.45 The New Wave Show. 8.00 The New Wave Show. 8.15 The New Wave Show. 8.30 The New Wave Show. 8.45 The New Wave Show. 9.00 The New Wave Show. 9.15 The New Wave Show. 9.30 The New Wave Show. 9.45 The New Wave Show. 10.00 The New Wave Show. 10.15 The New Wave Show. 10.30 The New Wave Show. 10.45 The New Wave Show. 11.00 The New Wave Show. 11.15 The New Wave Show. 11.30 The New Wave Show. 11.45 The New Wave Show. 12.00 The New Wave Show. 12.15 The New Wave Show. 12.30 The New Wave Show. 12.45 The New Wave Show. 1.00 The New Wave Show. 1.15 The New Wave Show. 1.30 The New Wave Show. 1.45 The New Wave Show. 2.00 The New Wave Show. 2.15 The New Wave Show. 2.30 The New Wave Show. 2.45 The New Wave Show. 3.00 The New Wave Show. 3.15 The New Wave Show. 3.30 The New Wave Show. 3.45 The New Wave Show. 4.00 The New Wave Show. 4.15 The New Wave Show. 4.30 The New Wave Show. 4.45 The New Wave Show. 5.00 The New Wave Show. 5.15 The New Wave Show. 5.30 The New Wave Show. 5.45 The New Wave Show. 6.00 The New Wave Show. 6.15 The New Wave Show. 6.30 The New Wave Show. 6.45 The New Wave Show. 7.00 The New Wave Show. 7.15 The New Wave Show. 7.30 The New Wave Show. 7.45 The New Wave Show. 8.00 The New Wave Show. 8.15 The New Wave Show. 8.30 The New Wave Show. 8.45 The New Wave Show. 9.00 The New Wave Show. 9.15 The New Wave Show. 9.30 The New Wave Show. 9.45 The New Wave Show. 10.00 The New Wave Show. 10.15 The New Wave Show. 10.30 The New Wave Show. 10.45 The New Wave Show. 11.00 The New Wave Show. 11.15 The New Wave Show. 11.30 The New Wave Show. 11.45 The New Wave Show. 12.00 The New Wave Show. 12.15 The New Wave Show. 12.30 The New Wave Show. 12.45 The New Wave Show. 1.00 The New Wave Show. 1.15 The New Wave Show. 1.30 The New Wave Show. 1.45 The New Wave Show. 2.00 The New Wave Show. 2.15 The New Wave Show. 2.30 The New Wave Show. 2.45 The New Wave Show. 3.00 The New Wave Show. 3.15 The New Wave Show. 3.30 The New Wave Show. 3.45 The New Wave Show. 4.00 The New Wave Show. 4.15 The New Wave Show. 4.30 The New Wave Show. 4.45 The New Wave Show. 5.00 The New Wave Show. 5.15 The New Wave Show. 5.30 The New Wave Show. 5.45 The New Wave Show. 6.00 The New Wave Show. 6.15 The New Wave Show. 6.30 The New Wave Show. 6.45 The New Wave Show. 7.00 The New Wave Show. 7.15 The New Wave Show. 7.30 The New Wave Show. 7.45 The New Wave Show. 8.00 The New Wave Show. 8.15 The New Wave Show. 8.30 The New Wave Show. 8.45 The New Wave Show. 9.00 The New Wave Show. 9.15 The New Wave Show. 9.30 The New Wave Show. 9.45 The New Wave Show. 10.00 The New Wave Show. 10.15 The New Wave Show. 10.30 The New Wave Show. 10.45 The New Wave Show. 11.00 The New Wave Show. 11.15 The New Wave Show. 11.30 The New Wave Show. 11.45 The New Wave Show. 12.00 The New Wave Show. 12.15 The New Wave Show. 12.30 The New Wave Show. 12.45 The New Wave Show. 1.00 The New Wave Show. 1.15 The New Wave Show. 1.30 The New Wave Show. 1.45 The New Wave Show. 2.00 The New Wave Show. 2.15 The New Wave Show. 2.30 The New Wave Show. 2.45 The New Wave Show. 3.00 The New Wave Show. 3.15 The New Wave Show. 3.30 The New Wave Show. 3.45 The New Wave Show. 4.00 The New Wave Show. 4.15 The New Wave Show. 4.30 The New Wave Show. 4.45 The New Wave Show. 5.00 The New Wave Show. 5.15 The New Wave Show. 5.30 The New Wave Show. 5.45 The New Wave Show. 6.00 The New Wave Show. 6.15 The New Wave Show. 6.30 The New Wave Show. 6.45 The New Wave Show. 7.00 The New Wave Show. 7.15 The New Wave Show. 7.30 The New Wave Show. 7.45 The New Wave Show. 8.00 The New Wave Show. 8.15 The New Wave Show. 8.30 The New Wave Show. 8.45 The New Wave Show. 9.00 The New Wave Show. 9.15 The New Wave Show. 9.30 The New Wave Show. 9.45 The New Wave Show. 10.00 The New Wave Show. 10.15 The New Wave Show. 10.30 The New Wave Show. 10.45 The New Wave Show. 11.00 The New Wave Show. 11.15 The New Wave Show. 11.30 The New Wave Show. 11.45 The New Wave Show. 12.00 The New Wave Show. 12.15 The New Wave Show. 12.30 The New Wave Show. 12.45 The New Wave Show. 1.00 The New Wave Show. 1.15 The New Wave Show. 1.30 The New Wave Show. 1.45 The New Wave Show. 2.00 The New Wave Show. 2.15 The New Wave Show. 2.30 The New Wave Show. 2.45 The New Wave Show. 3.00 The New Wave Show. 3.15 The New Wave Show. 3.30 The New Wave Show. 3.45 The New Wave Show. 4.00 The New Wave Show. 4.15 The New Wave Show. 4.30 The New Wave Show. 4.45 The New Wave Show. 5.00 The New Wave Show. 5.15 The New Wave Show. 5.30 The New Wave Show. 5.45 The New Wave Show. 6.00 The New Wave Show. 6.15 The New Wave Show. 6.30 The New Wave Show. 6.45 The New Wave Show. 7.00 The New Wave Show. 7.15 The New Wave Show. 7.30 The New Wave Show. 7.45 The New Wave Show. 8.00 The New Wave Show. 8.15 The New Wave Show. 8.30 The New Wave Show. 8.45 The New Wave Show. 9.00 The New Wave Show. 9.15 The New Wave Show. 9.30 The New Wave Show. 9.45 The New Wave Show. 10.00 The New Wave Show. 10.15 The New Wave Show. 10.30 The New Wave Show. 10.45 The New Wave Show. 11.00 The New Wave Show. 11.15 The New Wave Show. 11.30 The New Wave Show. 11.45 The New Wave Show. 12.00 The New Wave Show. 12.15 The New Wave Show. 12.30 The New Wave Show. 12.45 The New Wave Show. 1.00 The New Wave Show. 1.15 The New Wave Show. 1.30 The New Wave Show. 1.45 The New Wave Show. 2.00 The New Wave Show. 2.15 The New Wave Show. 2.30 The New Wave Show. 2.45 The New Wave Show. 3.00 The New Wave Show. 3.15 The New Wave Show. 3.30 The New Wave Show. 3.45 The New Wave Show. 4.00 The New Wave Show. 4.15 The New Wave Show. 4.30 The New Wave Show. 4.45 The New Wave Show. 5.00 The New Wave Show. 5.15 The New Wave Show. 5.30 The New Wave Show. 5.45 The New Wave Show. 6.00 The New Wave Show. 6.15 The New Wave Show. 6.30 The New Wave Show. 6.45 The New Wave Show. 7.00 The New Wave Show. 7.15 The New Wave Show. 7.30 The New Wave Show. 7.45 The New Wave Show. 8.00 The New Wave Show. 8.15 The New Wave Show. 8.30 The New Wave Show. 8.45 The New Wave Show. 9.00 The New Wave Show. 9.15 The New Wave Show. 9.30 The New Wave Show. 9.45 The New Wave Show. 10.00 The New Wave Show. 10.15 The New Wave Show. 10.30 The New Wave Show. 10.45 The New Wave Show. 11.00 The New Wave Show. 11.15 The New Wave Show. 11.30 The New Wave Show. 11.45 The New Wave Show. 12.00 The New Wave Show. 12.15 The New Wave Show. 12.30 The New Wave Show. 12.45 The New Wave Show. 1.00 The New Wave Show. 1.15 The New Wave Show. 1.30 The New Wave Show. 1.45 The New Wave Show. 2.00 The New Wave Show. 2.15 The New Wave Show. 2.30 The New Wave Show. 2.45 The New Wave Show. 3.00 The New Wave Show. 3.15 The New Wave Show. 3.30 The New Wave Show. 3.45 The New Wave Show. 4.00 The New Wave Show. 4.15 The New Wave Show. 4.30 The New Wave Show. 4.45 The New Wave Show. 5.00 The New Wave Show. 5.15 The New Wave Show. 5.30 The New Wave Show. 5.45 The New Wave Show. 6.00 The New Wave Show. 6.15 The New Wave Show. 6.30 The New Wave Show. 6.45 The New Wave Show. 7.00 The New Wave Show. 7.15 The New Wave Show. 7.30 The New Wave Show. 7.45 The New Wave Show. 8.00 The New Wave Show. 8.15 The New Wave Show. 8.30 The New Wave Show. 8.45 The New Wave Show. 9.00 The New Wave Show. 9.15 The New Wave Show. 9.30 The New Wave Show. 9.45 The New Wave Show. 10.00 The New Wave Show. 10.15 The New Wave Show. 10.30 The New Wave Show. 10.45 The New Wave Show. 11.00 The New Wave Show. 11.15 The New Wave Show. 11.30 The New Wave Show. 11.45 The New Wave Show. 12.00 The New Wave Show. 12.15 The New Wave Show. 12.30 The New Wave Show. 12.45 The New Wave Show. 1.00 The New Wave Show. 1.15 The New Wave Show. 1.30 The New Wave Show. 1.45 The New Wave Show. 2.00 The New Wave Show. 2.15 The New Wave Show. 2.30 The New Wave Show. 2.45 The New Wave Show. 3.00 The New Wave Show. 3.15 The New Wave Show. 3.30 The New Wave Show. 3.45 The New Wave Show. 4.00 The New Wave Show. 4.15 The New Wave Show. 4.30 The New Wave Show. 4.45 The New Wave Show. 5.00 The New Wave Show. 5.15 The New Wave Show. 5.30 The New Wave Show. 5.45 The New Wave Show. 6.00 The New Wave Show. 6.15 The New Wave Show. 6.30 The New Wave Show. 6.45 The New Wave Show. 7.00 The New Wave Show. 7.15 The New Wave Show. 7.30 The New Wave Show. 7.45 The New Wave Show. 8.00 The New Wave Show. 8.15 The New Wave Show. 8.30 The New Wave Show. 8.45 The New Wave Show. 9.00 The New Wave Show. 9.15 The New Wave Show. 9.30 The New Wave Show. 9.45 The New Wave Show. 10.00 The New Wave Show. 10.15 The New Wave Show. 10.30 The New Wave Show. 10.45 The New Wave Show. 11.00 The New Wave Show. 11.15 The New Wave Show. 11.30 The New Wave Show. 11.45 The New Wave Show. 12.00 The New Wave Show. 12.15 The New Wave Show. 12.30 The New Wave Show. 12.45 The New Wave Show. 1.00 The New Wave Show. 1.15 The New Wave Show. 1.30 The New Wave Show. 1.45 The New Wave Show. 2.00 The New Wave Show. 2.15 The New Wave Show. 2.30 The New Wave Show. 2.45 The New Wave Show. 3.00 The New Wave Show. 3.15 The New Wave Show. 3.30 The New Wave Show. 3.45 The New Wave Show. 4.00 The New Wave Show. 4.15 The New Wave Show. 4.30 The New Wave Show. 4.45 The New Wave Show. 5.00 The New Wave Show. 5.15 The New Wave Show. 5.30 The New Wave Show. 5.45 The New Wave Show. 6.00 The New Wave Show. 6.15 The New Wave Show. 6.30 The New Wave Show. 6.45 The New Wave Show. 7.00 The New Wave Show. 7.15 The New Wave Show. 7.30 The New Wave Show. 7.45 The New Wave Show. 8.00 The New Wave Show. 8.15 The New Wave Show. 8.30 The New Wave Show. 8.45 The New Wave Show. 9.00 The New Wave Show. 9.15 The New Wave Show. 9.30 The New Wave Show. 9.45 The New Wave Show. 10.00 The New Wave Show. 10.15 The New Wave Show. 10.30 The New Wave Show. 10.45 The New Wave Show. 11.00 The New Wave Show. 11.15 The New Wave Show. 11.30 The New Wave Show. 11.45 The New Wave Show. 12.00 The New Wave Show. 12.15 The New Wave Show. 12.30 The New Wave Show. 12.45 The New Wave Show. 1.00 The New Wave Show. 1.15 The New Wave Show. 1.30 The New Wave Show. 1.45 The New Wave Show. 2.00 The New Wave Show. 2.15 The New Wave Show. 2.30 The New Wave Show. 2.45 The New Wave Show. 3.00 The New Wave Show. 3.15 The New Wave Show. 3.30 The New Wave Show. 3.45 The New Wave Show. 4.00 The New Wave Show. 4.15 The New Wave Show. 4.30 The New Wave Show. 4.45 The New Wave Show. 5.00 The New Wave Show. 5.15 The New Wave Show. 5.30 The New Wave Show. 5.45 The New Wave Show. 6.00 The New Wave Show. 6.15 The New Wave Show. 6.30 The



## THE ARTS

## Record Review

## Böhm's Idomeneo

by RONALD CRICHTON

Mozart Idomeneo. Mathis, Varady, Ochman, Schreier/Rundfunkchor Leipzig/Staatskapelle Dresden/Böhm. Four records in box. DG 2740 195, £14.75. Cassette 3371 043, £14.55.

Haydn L'isola disabitata. Zoghby, Lerer, Alva, Bruson/Orch. de Chambre de Lausanne/Dorral. Two records in box. Philips 6700 110, £8.99.

The new Idomeneo from Deutsche Grammophon has much to recommend it. Böhm conducts with a young man's vigour. He is particularly good on the Beethovenian sforzando accents with which the turbulent music is studded—in Elettra's first aria, to give only one example, and in the marvelous accompanied recitatives. The Verdian chromatics of Idomeneo's lead-in to the "Voto tremendo" ensemble send shivers down the spine every time one hears them. Sometimes a momentary lack of grip is perceptible. The quartet loses a little momentum before the end, and the barcarolle chorus is luxuriously slow, but not many would guess that the director of this performance was over eighty.

The cast is based on the Salzburg Festival revival of some years back, but with East German orchestra (the admirable Staatskapelle Dresden) and chorus (Leipzig Radio) instead of the Viennese ones. Wieslaw Ochman and Peter Schreier again sing Idomeneo and his son Idamante. Edith Mathis (who shared the role at Salzburg) is the Ila. There is a new Elettra in Julia Varady and she, as it happens, is the most remarkable of the soloists.

The voice has not entirely borne out the early promise—there seems to be a certain limitation of dynamic range. Yet the quality within that range is individual and beautiful. Miss Varady suggests a contained hysteria within which the extremes of the role—between "Idol mio" and the last desperate outburst—can be reached without inconsistency and with unflinching control. Idomeneo needs a coloratura Slegmund.

Idamante sings like an Italian who has taken the wrong boat. Most of his singing is acceptable. Some of it, like the outburst in Act 2 and the cavatina with chorus in the last act, is positively distinguished without calling up the war-weariness, conscience-racked king of Crete.

The effort of sounding reasonably boyish beside a light-voiced father leads Peter Schreier into a cultivated mellifluousness, varying in spite of the high quality of execution. The Ila of Edith Mathis, bright and compact in tone, ought to make more effect than it does—she is everything except the spontaneous and naturalness of a first-rate Ila. Hermann Winkler

as Arbace (allowed one of his arias) is surely a potential Idomeneo. The Dresden orchestra is splendid, if rather narrowly recorded, the chorus makes up in attack for lack of numbers (it would well suit the lighter instrumental forces used by Roger Norrington for Kent Opera's new Idomeneo).

Böhm as conductor is one thing. Böhm as Mozart scholar is another. Even if, after a lifetime of Cherubinos and Octavians, he can't stomach a soprano Idamante in the theatre, what justification (apart from the commercial attractions of Schreier's name) is there for a tenor in a recording? It isn't merely the difficulty of reconciling the voices of this Idomeneo and this Idamante. There is simply too much tenor tone—Arbace and the High Priest of Neptune are high voices too. The advantages are the Ila-Idamante duet, of which the later version (with tenor) may be preferred, and Schreier's honeyed singing of "Non temer, amato bene," the inserted aria with violin obbligato, unacceptable in the theatre but welcome on record when done as well as this.

Every conductor must make some choice among the embarrassing riches of this opera, but Böhm's selection is odd. "Fuor del mar" is heard in the shorter version (incomplete). "Torna la pace" goes altogether. On the other hand, Elettra's last aria (which Böhm suppressed at Salzburg in favour of the alternative accompanied recitative) is in. Not a note of the ballet music, of course, except the woe dance in the finale which is difficult to leave out. Otherwise—snip, snip go the busy, better-knowing Teutonic scissors. Yet the set spreads itself over eight not very full sides. The Philips version under Colin Davis, on six sides if not much cheaper, is still a contender.

H. C. Robbins Landon's monumental Haydn: Chronicle and Works, appearing in unchronological order, now reached the volume "Haydn at Esterháza, 1765-90" (Thames and Hudson, £30). Whether or not the documentary method is the solution for complete surveys of major figures, even those about whom such a mass of information is now available, this scholar with his unquenchable, but not starry-eyed enthusiasm, his ability to write colloquially without backslapping, continues to be readable and stimulating both in his own comments and in the documents he reproduces. The years at Esterháza, with the wide variety of music they required from Haydn, are especially rewarding, but any guide to them could get bogged down in detail. This one doesn't. What is more the book, not heavy for its size, is admirably produced. Among the works discussed the Esterháza operas have an

important place. One of them is L'isola disabitata, recently issued in the valuable Philips Haydn Opera cycle. This is strictly speaking not an opera but an "azione teatrale"—yet since that genre includes Gluck's Orfeo the distinction need not put anyone off. Robbins Landon rightly points out that such a work is ideal for gramophone purposes (I suspect he underestimates the possibilities for the theatre, but that is another matter). The text, by McLaster, concerns a gentleman (Gerardo) wrecked on a desert island and suddenly separated from his wife Constanza and her young sister, Silvia. Some years later, Gerardo escapes, returns in the hope of tracing Constanza, discovers her and explains his apparent treachery. Meanwhile Silvia, who has grown into an innocent, Miranda-like girl, happily pairs off with Gerardo's friend Enrico.

The peculiarity of the work is that the arias are separated not by lengths of secco recitative with harpsichord but by accompanied ones of such overblowing invention and orchestral richness that they are not shamed (though the dramatic context is much less pressing) by being heard immediately after those in Idomeneo. With the exception of Gerardo's "Non turba" in part two, and of Silvia's "Come il vapor" a little later, where we can enjoy Haydn's stovess in giving his mistress Luigia Polzelli something to exercise her voice without straining her modest talents, the arias are not all that interesting. But the final quartet, in which solo violin, flute, cello and bassoon are attached to the four singers, is a fascinating, fully-worked movement which sounds as though Mozart had somehow fused the vaudeville in Die Entführung with his Constanza's "Märtern aller Artern."

Early this century Weingartner revived the work in a German version. His discrimination was rewarded with the indifference usually shown to those before their time. Now, after re-conversion to opera seria, we can enjoy the music without difficulty (suddenly recalling an aria-duet in which Gerardo echoes the first verse sung by Constanza in a new key, I will modify the remark about the arias to "not equally interesting"). The men in this cast are best. The ageless Luigi Alva (Gerardo) is as stylish as ever. Renato Bruson (Enrico) does what Verdi need not be incompatible with Haydn. As Silvia, Linda Zoghby sings with more character than she did last summer as Glyndebourne's Mimì, but still not enough. Norma Lerer fills Constanza's music with good, even slightly stodgy tone. Dorati conducts with muscular vitality. The Lausanne Chamber Orchestra shines both in solo and ensemble work.



Sylvia Sass and Boris Christoff

Leonard Bur

## Covent Garden

## Don Carlos by ARTHUR JACOBS

Boris Christoff first appeared at Covent Garden in 1949, and in 1958 sang King Philip when Visconti's celebrated production of Verdi's Don Carlos was first revealed. The current revival serves not least as an occasion to salute this 30-year span in the career of one of the greater singer-actors of our time. The ageing king who walks with a cane, but who raises that cane as if to strike a presumptuous courtier—the king whose eyes flash with pride but whose power must compromise with that of the Holy Inquisition—this, visually as well as in the darkly expressive, care-laden voice, has been made by Boris Christoff into the very incarnation of the character. Its vocal range and emotional force were as striking as ever on Tuesday evening.

The renewed opportunity of relishing this interpretation almost excuses the weakness of Covent Garden in continuing to present the work not in its original French but in the conventional Italian translation. (This is odder when the management's general pursuit of original languages has recently extended to Eugene Onegin in Russian.) Even King Philip's "Ella giamaica m'amò" gives a sense false to the original (the king's complaint is really "She loves me no longer," not "She has never loved me"). While in Princess Eboli's Veil Song it is impossible for a singer to make sense of both words and music together.

An impassioned total performance such as this one can admittedly thrust the question of language into the background, but a more alarming threat presented itself. It was announced that less than full scenery would be used "because of unwillingness of members of the stage staff to operate the scenery cloth store." It was evident, however, that few if any of the public availed them-

selves of the offer of a refund for their tickets. The reduced scenic presentation was, with the solitary exception of a daylight garden scene against an incongruous black backcloth, quite acceptable, with Visconti's production now capably supervised by Christopher Renshaw.

Of the other principal performances, none quite matched Christoff's, or indeed matched memories of some of Covent Garden's former interpreters. Renato Bruson is an Italian baritone of distinguished vocal line, with a tone inviting one to close one's eyes and sink into enjoyment of disembodied sound—but this was not the commanding, resolute, heroic figure of the Marquis of Posa, such as Tito Gobbi unforgettable portrayed. Making his Covent Garden debut, Vassil Moldoveanu as Don Carlos was disturbingly off-pitch at first but later had moments of good, forthright singing.

Elizabeth Connell, one of the most interesting performers on the regular strength of the English National Opera at the Coliseum, was happily engaged as Eboli. Not all the coloratura of the Veil Song was quite accurately placed, and she has not yet managed the development of a purely decorative character into that of a scorned, vengeful woman, but the radiant tone and attractive personality promised well. Her fiery "Tremate per te" sparked off an exciting trio in her confrontation with Posa and Carlos.

At her first entry as Elisabeth, Sylvia Sass had shown—in a phrase of great pathos climaxing on a high G—her command of line and of soft,

"covered" tone. Alas, this tone was an expressive device which she made tedious by over-use, along with what organisms might call a "swell pedal" effect of increasing volume to a high note and then decreasing it. Coupled with a sort of sleep-walking demeanour presumably meant to signify the character's repressed torment, it amounted to a disappointing performance from an artist previously much praised.

Gwynne Howell admirably conveyed the sinister force of the Grand Inquisitor, and the choral part and minor roles came over strongly. It was a pity that Malcolm King should lack a sufficiently firm low F sharp for the role of the mysterious monk, but the participation of Tom McDonnell (peasant), Diana Montague (page), John Dobson (Lerma), Norman Welsby (herald), and Teresa Cahill (voice from heaven) was of the proper Covent Garden standard.

The conducting of the 29-year-old American, James Conlon (not even born when Christoff first conquered operatic London) confirmed the high opinion raised when he recently conducted the London Philharmonic. He opted for a longer version of the opera than is usually heard, including the chorus of distressed peasants at the beginning and an additional, martial section in the final duet of tragic farewell between Carlos and Elisabeth. If he did not extract the full electric charge from the score, he displayed its idiom with feeling and without vulgar showmanship, giving consideration to the soloists and coaxed the orchestra to some fine playing.

## Arts, Cambridge

## The Constant Wife

by B. A. YOUNG

As the biographies mount up, so the autobiographical content of Maugham's *The Constant Wife* becomes more and more evident. Susie Calcutt, the designer of this production, has removed any doubt that Constance Middleton is Sybil Maugham by having all the furniture of the Middleton's Harley Street drawing-room re-covered in white as soon as Constance goes into the decoration business.

Maugham's theme, that wives should have as much freedom for infidelity as their husbands, can shock us no longer infidelity being so seldom taken seriously. But *The Constant Wife* is still an elegant little comedy, even if it does threaten to come to an end in its second act, when John's affair with Marie-Louise has been sorted out by the complaisant Constance, leaving the third act only to make the requisite balancing point and mop up the spare characters. It looks back nostalgically to the days when comedy meant funny lines as well as funny situations, and it is a pleasure to hear Mrs. Culver say things like "Frankness is a very efficient screen for your thoughts," even if Marjorie Scott does sometimes say them in a tone better suited to the hustings than the drawing-room.

Susan Jameson keeps Constance down to a decent, wisely level with no hint of the superwoman about her, so making her views on wifely conduct seem even more outrageous. For me there is a special charm in plays whose characters are mature, thinking adults. Nowadays heroes and heroines tend to be young and inexperienced. If little Marie-Louise, John's mistress in the play, were to express Constance's ideas in the comic child-like lisp Pamela Moise-witsch has given her, they wouldn't shock anyone. Coming from a reasonable upper-middle class lady, they are a torpedo launched at society, as represented by Trevor Baxter's sensible middle-aged John. Dallas Adams too, rather than play Bernard Kersal to match the green romance of his lines, makes him a commanding Colonial with a voice designed for shouting at coolies.

All the women look ravishing in their 1920-ish clothes and cloche hats off the face, and Sheila Hancock, the director, knows how to take advantage of a script involving five smart, wealthy ladies. Even Miss Scott, playing the grandmother of a 15-year-old, gleams in her silver urban for Act One as a beacon for the foolish generation as reluctant in their praise of older women.

## Theatre Upstairs

## Young Writers' Festival

by MICHAEL COVENEY

There are five plays by teenage writers in this year's Royal Court Young People's Theatre Scheme festival and, as usual, the blessings are mixed. Directed by Philip Hedley and Mervyn Willis, a young professional company captures perfectly that inevitable mixture of callow gawkiness and end-of-term high spirits. Best of all, perhaps, is a comic-strip fairy-tale finale which lasts all of fifteen minutes and has been scripted by no less than thirteen hands. What is more, all thirteen have, apparently, assisted Mr. Hedley in the direction of *Humbly*. The piece is quite fun, but rehearsals must have been a riot.

Elsewhere, Douglas Parkin's *Miracles Do Happen* shows what vicars get up to while their wives are off discussing the church funds. They drink gallons of whisky, play strip poker and listen to rotten poetry. The wives are a lively lot, one of them excusing her indiscreet laughing fits with the disturbing line, "It must

be my Gordon rubbing off on me."

Paul Lister's *Island* is the "most promising" of the bunch, with three "inner city products" pelting motorway traffic with anger and garbage from the central reservation. I doubt if Mr. Lister (aged 19) has seen any plays by Stephen Pollakoff or Peter Flannery, but former teenagers such as myself may be forgiven for hoping that his vision does not coagulate too quickly into fashionable fadism.

Julia James (aged 15) has contributed a bright classroom piece for starchy fourth-form girls, while a two-hander by Mark Power (aged 18) exhibits a felicitous turn of phrase every now and then, but is a little dull in its build-up to violent fall-out between two college boys. The designs, by students at the Central School of Art and Design, are deliciously ingenious and there are good performances from Brian Aitree, Laurence Rudic, Catherine Hall and, especially, Anita Dobson.

## Logan Hall

## The Jacobin by ELIZABETH FORBES

Bohus, the so-called Jacobin of Dvorak's opera, is no blood-hirsty revolutionary, but a Bohemian exile who escapes from Paris with his wife Julie and returns to his native town. There he discovers that the Count his father is about to hand over his lands to Adolf, cousin to Bohus and nephew to the Countess, and he is only person to recognise the missing heir and he has him imprisoned. But Julie, by singing a lullaby that Bohus' mother used to sing to him, softens the old Count's heart and father and son are reconciled. Adolf, in his turn, is banished.

Dvorak's score is saturated with Bohemian folk music, some of it ad or nostalgic, as in the lullaby or the duet in which Bohus and Julie remember the songs of their childhood: some of it 'lythical and bright, like the feeling ensembles for Benda, his local school-master, his laughter Terinka and Jiri, the young forester she loves. Together with Filip, the humorous but slightly sinister Steward, who also fancies Terinka, they form a sub-group that in the second act threatens to swamp the main characters.

The scene where Benda rehearses the children in the serenade he has written to welcome the Count makes delightful comedy. Benda naturally prefers the rich if elderly Filip to the young but impoverished Jiri as a son-in-law, but he does

not dare to discourage Jiri too much—he is a tenor, and tenors are scarce. The concert performance given by the Chelsea Opera Group in Logan Hall on Tuesday as part of the Camden Festival brought out much of the beauty and originality of Dvorak's melodies, but it also pointed out the composer's poor dramatic pacing. Nearly every number seemed to continue just a fraction too long.

Antony Ransome made a sincere, not always vocally steady Bohus. Ann-Marie Connors sang the lullaby most sensitively and, in the duet with Roderick Earle's sad-hearted Count, introduced a note of real, touching emotion. Marie McLaughlin's delightful Terinka

## Elizabeth Hall

## Mikhail Pletnyev

by DOMINIC GILL

Mikhail Pletnyev (b. 1957) isissimo filigree and thunderous the young Soviet first prize-winner of last year's Chaikovsky Piano Competition in Moscow. His playing breathes "competition prize" from every pore. He has a stunning finger-technique: as he showed us first on Monday night at the Festival Hall in Chaikovsky's B flat minor concerto, and the following evening again in a debut recital, pres-

was well-matched by the lyrical-voiced Jiri of Keith Lewis. Graeme Matheson-Bruce rehearsed his serenade with great good humour—the COG Chorus and the Choir of Camden School for Girls responded heartily—while Roger Bryson and Jack Strauch, as Filip and Adolf respectively, did what they could, with a pair of half-hearted villains.

Stephen Barlow, conducting the eager COG Orchestra, obtained alert if not always very smooth playing. The opera was sung in an English translation by Alan Reddish and Hilton Kellner that had the merit of clarity though its phrasing was not exactly elegant.

## Elizabeth Hall

## Mikhail Pletnyev

by DOMINIC GILL

Below the surface of the notes, however, the performances were unremarkable. His Bach E minor Partita had all the conventional virtues of clear articulation and pedalling, clear voice-leading, as well as all the conventional weaknesses of wooden phrasing, dull rhythms, unfocused dramatic line—all the marks of a brilliant technical schooling, but few traces of a substantial, original, poetical voice.

The efficiency with which he delivered the bars, then the longer phrases, and finally whole movements of Beethoven's sonata op. 111 was truly admirable; but it had the unmistakable accents of a taught performance, not at root, at heart, the pianist's own. His Prokofiev seventh sonata likewise was musically brilliant—but emotionally clouded, of little tension or centre. I look forward to hearing Pletnyev again: but after he has stopped training, and started to think, and listen, and play.

## Elizabeth Hall

## Lassus Ensemble

The problem of presenting liturgical music in the concert hall is not, I am convinced, the familiar one of church versus concert: the atmosphere concrete: the atmosphere churches add is all too often anachronistic and spurious. The difficulty is that of condensing music meant to intersperse a ritual into a continuous sequence. The rite, with its pauses, speech and chant gives the music a context which the concert hall cannot.

The London Lassus Ensemble in the Elizabeth Hall on Monday night presented all the music by Lassus which would have been heard in the two long Tenebrae services on the evenings before Maundy Thursday and Good Friday. We heard a beautiful counterpoint of lessons and responses—for each day, but without the psalms (sung, at any rate in the Roman usage, to monotonous) which would have prefaced each of the three "nocturnes," and heightened the power of the polyphonic settings in them.

As it was, even the chanted lessons were sensibly cut: attention was focused on the polyphony of the Lamentations (in the first nocturne) and of the Responses (in the second and third). There was still far too much to take in; I was exhausted by the notional end of Maundy Thursday. The music, grave but deeply expressive, was superb in a way quite distinct from the passion and drama of Victoria's settings. Clive Wearing, conducting, maintained the flow well: he brought out the savagery of the sensual kiss of betrayal, the fierce insistence of the plotter's cry "venite mittamus lignum in panem," the tortuous scheming of the elders.

His choir could have blended better, especially the soloists in the versicles, and the plainchant group. Stephen Varcoe was a dignified cantor. Fortunately, no effort was made to imitate the ritual of the Tenebrae service: I had visions of the electric lights of the Elizabeth Hall being extinguished one by one, but the liturgical drama was played out against a hard, bright glare.

NICHOLAS KENTON

## A dynamic and progressive force in Turkish business affairs at home and abroad

## AKBANK

Capital increased from TL. 600.000.000 (\$ 24.000.000) to TL. 1.000.000.000 (\$ 40.000.000) on 12th February 1979

● Turkey's second largest commercial bank and the first in the purely private sector.

● A Board and Executive comprised of men of distinction drawn from industry, commerce and the professions, each pre-eminent in his own field providing a wealth of business experience.

● A Head Office and International Division in Istanbul and 566 branches throughout the country of which 20, in key locations, are authorised to handle foreign transactions.

● Representative offices in New York, London and Frankfurt, liaison offices in Essen, West Berlin and Munich, and banking correspondents world-wide.

● An experienced management backed by a staff of nearly 10,000 highly trained employees using modern accounting equipment and methods.

● An important participant in the equity of a wide spread of Turkish industrial companies, and the holder of a controlling interest in Turkey's leading insurance group.

Just some of the features that have brought us to the fore in Turkish banking which, coupled with a high standard of efficiency and a rigid adherence to banking precept, are very good reasons why you may wish to prefer us.

Balance sheet as at:			
ASSETS	1.1.1978	1.1.1978	Rate of Increase %
Cash and due from banks	715,718,833	403,878,728	76.4
Receivables	432,823,887	316,163,854	27.9
Investment securities	180,967,894	104,037,446	53.9
Loans	1,120,634,603	780,871,133	43.5
Participations	67,896,712	48,197,209	38.0
Bank premises and equipment	11,288,238	30,984,502	21.3
Other assets	132,517,413	78,945,385	57.2
Total assets	2,987,268,021	1,764,192,135	51.2
LIABILITIES			
Deposits	1,794,294,313	1,258,739,494	42.4
Borrowed funds	550,481,828	304,435,186	80.8
Other liabilities	228,743,708	135,484,548	58.6
Total liabilities	2,573,519,849	1,698,659,228	51.5
STOCKHOLDERS' EQUITY			
Capital	24,000,000	24,000,000	—
Reserves	48,281,514	32,226,750	48.3
Provisions	19,386,640	7,311,150	165.2
Total stockholders' equity	92,668,154	63,537,900	43.8
Total liabilities and stockholders' equity	2,666,268,001	1,764,192,135	51.2

(Continued on TL. 25 - U.S. \$ 77)

At your service for all banking transactions, domestic and foreign, and as a ready source of information and guidance on import/export trade, joint ventures and ancillary matters.

## AKBANK

HEAD OFFICE  
Medi Mecan Cad. 65-69  
Fındıklı - Istanbul, Turkey  
Telephone: 45 42 20  
Telex: 22 641 akbn tr

INTERNATIONAL DIVISION  
İhki Cad. 417/419  
Teşvikiye - Istanbul  
Telephone: 44 56 03-43 80 75  
Telex: 22 279 akbn tr

NEW YORK REPRESENTATIVE  
40 Park Avenue  
New York, N.Y. 10022 U.S.A.  
Telephone: (212) 932-1212  
Telex: Akbank 66711

LONDON REPRESENTATIVE  
46-54 Moorgate  
London EC 2R 6EL ENGLAND  
Telephone: 01- 639-1266  
Telex: 881230 akbn g

FRANKFURT REPRESENTATIVE  
6 Frankfurt/Main  
Kaiser Str. 41 W. GERMANY  
Telephone: 01- 639-1266  
Telex: 412116 Ekbn d

**Five Star ★★★★★ SOUTH AFRICA**

\* Grand Tour from £890 \* A choice of Tours and Safaris from £602 \* Freedom Holidays with Car Hire and accommodation from £528 \* Motor Safaris from £399 \* Centre Holidays from £355.

Weekly departures by scheduled flights.  
16 page colour brochure from your ABTA Agent or:

**TEMPO TRAVEL LTD.**  
337 Bowes Rd., London NW11 7T  
Tel: 01-561.1153.



## FINANCIAL TIMES

BRACKEN HOUSE, CANNON STREET, LONDON EC4A 3BY

Telegrams: Finantime, London F54. Telex: 536341/2, 535357

Telephone: 01-248 8000

Thursday March 29 1979

## Competition and the law

COMPETITION policy in this country, unlike that of the U.S. and some European countries, is not predicated on the belief that the competitive system should be upheld at all costs. The UK's regulatory bodies have always recognised that the economic benefits of concerted action or concentrated market power may on occasion outweigh the economic disbenefits. Neither has the development of policy, and the decision in particular cases, been based solely upon economic considerations. The promotion and maintenance of competition has to be weighed against other policy considerations such as employment, external payments, or regional policy.

But where particular categories of anti-competitive practices have been found to operate invariably against the public interest, they have either been banned outright or subjected to judicial prohibition unless a case for exemption can be demonstrated on the basis of certain statutory criteria.

Certainly and certain other forms of collective discrimination relating to the supply of goods were legislated against on this basis in 1968; and the restrictive practices legislation has since been extended to the fixing of resale prices by suppliers, to information agreements, and more recently to the supply of commercial and many financial services.

**Pragmatic**  
This pragmatic approach, using the courts where justiciable issues could be identified and administrative investigations by the Monopolies and Mergers Commission where no *a priori* presumption about the public interest can be made, has stood the economy in good stead. Together with trade liberalisation, it has helped to create a more competitive industrial climate and promoted efficiency.

But it has meant that the scope of the UK restrictive practices legislation is defined in terms of the form of anti-competitive arrangements, rather than their purpose or effect as in the U.S., West Germany, and—in particular—the EEC. As a result, some agreements caught up in the legislation have no significant effect on competition, while other anti-competitive arrangements are excluded.

British membership of the Community has naturally prompted discussion as to whether we should align our system with that of the EEC. The inter-departmental review

of competition policy, whose second report on restrictive trade practices policy was published yesterday, sensibly rejects this argument. There might have been a case for adopting laws based on the economic benefits of concerted action or concentrated market power may on occasion outweigh the economic disbenefits. Neither has the development of policy, and the decision in particular cases, been based solely upon economic considerations. The promotion and maintenance of competition has to be weighed against other policy considerations such as employment, external payments, or regional policy.

**Adverse**  
There is, however, a case for tidying up the UK restrictive practices laws in the light of experience here and in the EEC. Some of the inter-departmental committee's recommendations were under active discussion a decade ago—for example, powers to add to the list of *per se* prohibitions, collusive tendering and other practices which have been consistently found to operate against the public interest, and the power to order the cessation of others in particular instances after an adverse finding by the Monopolies Commission. Other recommendations—such as tougher sanctions against unregistered restrictive agreements and stronger investigatory powers for the Office of Fair Trading—have been prompted by more recent events.

The more controversial parts of the report deal with the question of balancing the more recent claims of industrial policy with those of restrictive practices policy. On the whole, the committee adopts a sensible—that is, pro-competition policy—line. It could save both time and costs if the Director of Fair Trading were to have the discretionary power to approve or condemn agreements where the issues are clear cut, subject to appeal to the Court not only by the parties concerned but also by others whose interests might be harmed by an agreement.

**Arbitrary**  
Widening Ministers' existing power to exempt agreements of "national importance" from the processes of the law is another matter. It could create a privileged class of restrictive agreements, based upon arbitrary political judgments. There is no reason why agreements which are claimed to offer major offsetting economic benefits should not be subjected to the same tests as others; particularly if the OFT were to be given the power to vet agreements before or, where agreed, in place of the full judicial process.

## Portugal needs stability

THE RESTORATION of Portuguese democracy has been widely, and rightly, admired by other Western countries. Few people, however, would deny that governing the country has been a rather thankless task over the past three years. The country's intractable economic problems, due partly to the revolutionary excesses of 1976 and partly to long years of neglect under Dr. Salazar's dictatorship, have made substantial foreign aid indispensable. But none of the four Governments since the first democratic elections in 1976 has so far possessed the combination of determination and broad political support necessary to put through the unpopular measures necessary to put the country firmly back on its feet.

**Armed forces**  
With no single party commanding a Parliamentary majority, successive Governments have had to steer a precarious course. Left-wing policies risk the disappearance of the ever-watchful Armed Forces, while a tilt to the right is bound to alienate the powerful Communist-dominated trade unions. The difficulty of undoing some of the damage done in 1975 has constantly been underlined, for example, by the problems of agrarian reform. Less than two weeks ago, the present Government of independent "technocrats" led by Sr. Carlos Mota Pinto was shaken by the resignation of a minister demoralised by persistent Communist criticism of his attempts to return collectivised land to its former owners. Now Sr. Mota Pinto has tendered his own resignation following the defeat of his austerity budget in Parliament last week.

In addition to his other problems Sr. Mota Pinto has to face the deep suspicion of the political parties, which remain unconvinced of the democratic credentials of his independent non-party Government. Nevertheless, it is not clear that they really intended to bring him down by rejecting the budget last week. Not only are they divided among themselves, they were also unsure of each other's intentions when the budget was

put to the vote. That being so, and given the lack of any obvious alternative, President Eanes has probably acted wisely in refusing to accept Sr. Mota Pinto's resignation.

Whether he likes it or not, President Eanes has been forced to assume a greater share of responsibility for running the country since the end of party Government last year. Earlier this month, he found himself obliged to issue a reminder that the reason for his appointment of Sr. Mota Pinto was the failure of the elected political parties to agree on a governing formula. Reaffirming his support for the Government's stand on land ownership, he made the perfectly fair point that he was accepting risks of unpopularity that the political parties "would not or could not accept."

So long as the parties are incapable of forming a Government, and there is little enthusiasm for new elections, the most sensible course is for Sr. Mota Pinto to try to carry on. Elections would be unlikely to alter the political line-up significantly and would almost certainly fail to produce a majority Government. Under the Constitution, elections have to be held next year in any event, and few people in Lisbon want to have to go through the process twice in twelve months.

**Compromise**  
Another reason for Sr. Mota Pinto staying in office is the need to re-negotiate Portugal's economic policy commitments to the International Monetary Fund so as to make fresh international finance available. The fund is unlikely to resume negotiations in Lisbon until the disputed budget and fresh economic guidelines have been safely adopted.

It should not be impossible to work out a compromise solution on the budget, which Sr. Mota Pinto has now agreed to re-submit to Parliament next month. In recent days, rumblings have once again been heard from conservative elements, in the armed forces. Portugal cannot afford itself the luxury of yet another political crisis.

## Nordic pulp and paper: trouble mounts

BY WILLIAM DULLFORCE, NORDIC CORRESPONDENT

THE WORD "crisis" has been quite commonly used in the past few months in talking about the Swedish and Finnish forest industries. The recent improvement of the prices and export earnings of pulp and paper have not put an end to that. Governments have been forced grudgingly to rescue one or two of the most exposed companies, and greater state involvement of some form or other appears to be inevitable. The managing director of Sweden's largest pulp and paper group, Mr. Bo Rydin of Svenska Cellulosa (SCA), recently called on the Government to take a stake in the pulp-making industry.

Attitudes are coloured by the severe profit slump almost all the mills have experienced in the past three years, but the anxieties of company managers have deeper roots. The long-term problems they foresee stem from the attack on their traditional European market by North American and other competitors operating in more favourable capital, raw material and cost conditions.

Traditionally the Swedish and Finnish pulp and paper industries have been the domain of private enterprise with very few State-owned companies, but the present structural problems have prompted political demands for greater public control. They have come from the Swedish Social Democrats, the Swedish Paperworkers' Union and the Finnish Communist Party.

Finnish Social Democrat Ministers, who have been reluctantly drawn into a disavowal with leaders of the industry during the past year, say they are for a considerable "strategic" agreement. It would be no political commitment to provide it on the industry's terms and to accept some form of State participation, they say. However, the non-socialist parties' gains in the recent election could enhance the companies' chances of getting financial relief without direct State involvement in the business.

Both the Swedes and the Finns are also sensitive to the possible reaction from the European paper industry and from the EEC Commission. In Brussels, to the strategic decisions they may make. The advantages of the two countries' free trade agreements with the EEC, they say, need to be consolidated, not put at risk.

Conversely, at a time when the Commission itself is probing the state of the EEC paper and board industry, and the French Government, for instance, is anxious to restructure its own industry, the situation in the Nordic countries must be of prime interest. These countries are still the largest producers of EEC pulp and paper imports.

See page 2 of this issue for the

Boston consulting group on Swedish industry has been harshly criticised by the manufacturers for categorising forest products among those branches which were in decline and could not contribute to long-term economic growth. The critics argue with some justification that the Boston group underestimated the opportunities for a more efficient and profitable exploitation of the available wood resources by making products involving a greater depth of manufacture.

But the group's approach, emphasising corporate economics and the competitive

their forest land to a point where Arctic forests with slow growing pines are booked at six times the value of forest plantations in the southern U.S.

The Finnish companies claim that the book value accurately reflects the true market value, a circumstance which only reflects the social conditions under which they operate and the high cost of their raw material. Mr. Aarno Eila, the vice president of Pöyry responsible for the study, calculates that wood under bark costs \$35 per cubic metre at the mill in Finland, compared with around \$20 in the southern U.S.

harvesting an expensive business. Mr. Lars Sundblad, managing director of Iggesund, calculated recently that a Swedish mill producing 250,000 tonnes a year of bleached sulphate pulp would earn SKr 100m (£11.4m) a year less than a comparable U.S. mill.

When these factors are combined with the slower growth rate of trees in the northern climate, the Nordic producers start with a significant disadvantage. It has been made worse recently by the decline of both the U.S. and Canadian dollars. The two factors together have eroded the advantage of the

not intend to disturb the European market for that product.

Some companies are planning new investments. SCA has several projects close to the decision stage. Stora Kopparberg and Pappyrus have announced their intention to invest in new plant to make magazine paper and lightweight coated paper. In Finland Rauma Repola is expanding and modernising its paper and machinery.

When discussing the future of their companies and industry, most Nordic paper makers sooner or later return to one preoccupation: how to generate

normal banking risks. This could not have happened without the tacit though not formal approval of the Bank of Finland.

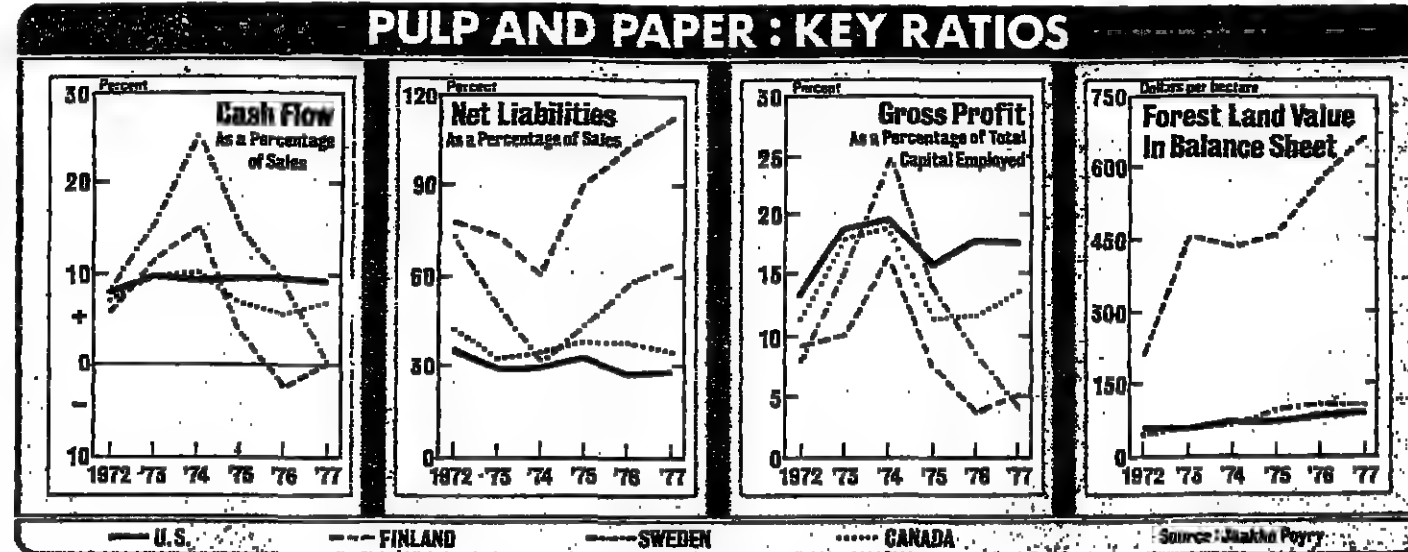
In Sweden the Liberal minority Government is not interested in State participation but is being forced to take holdings in NCB and Sodra, the companies owned by the farmers' co-operatives. The restructuring of these companies is expected to cost over SKr 1bn. Apart from this forced intervention, the Government would prefer to let market forces determine the future shape of the industry.

An analysis undertaken by the Ministry of Industry, however, concluded that the 20 largest Swedish companies would need to spend some SKr 17bn in the next five years on rationalising and modernising and on the establishment of new plant producing higher quality products. If they were to remain competitive, it put the total capital requirement, including investments in supporting sectors and the costs of mergers, at SKr 40bn.

It is against the background of these figures that the surprising suggestion of Mr. Rydin, SCA's managing director, that the state should help bear the costs of pulp manufacture must be seen. Mr. Rydin's point is that on the basis of current wood prices and the present dollar rate it simply does not pay companies to invest in new pulp mills or in modernising existing plants.

At the rate of SKr 4.90 to the U.S. dollar which existed briefly after the devaluation of the krona in August 1977, the Swedish pulp mills could operate at profit, Mr. Rydin calculates. Since then the rate has fallen to SKr 4.38. If the Government is not prepared to change the rate again, it should be ready to invest public funds in pulp production, he argues. But it is doubtful whether the present Government or the Social Democrats, one which could replace it later this year, would be prepared to subsidise the forest industry by financing the unprofitable part of its production. It could have undesirable repercussions in Brussels.

The Swedish and Finnish forest industries contain many companies which are still healthy and vigorous. At the same time it is evident that the industries as a whole are badly stretched financially and have to cope with competitive disadvantages arising from their Governments' social policies. The situation is almost certain to call for greater state involvement but the exact shape of this involvement has yet to emerge, partly because both countries have either had or will have a general election this year, and partly because the reaction of the industry's European customers has yet to be gauged.



situation of Swedish companies, did spotlight some weaknesses in the pulp and paper companies. If it is assumed that they will continue to operate in market economy conditions, these deficiencies have since been underlined by the Finnish consultants, Jaakko Pöyry. Pöyry's basic aim was to compare the Nordic companies with the North American. The Finnish consultants' major findings are illustrated in the accompanying diagrams.

They show that with the exception of 1974 the Americans and Canadians have achieved a higher return on capital employed and that the gap widened in 1976 and 1977. They managed this with consistently lower capital expenditure. The most significant diagrams are those showing the ratios of liabilities to sales and the valuation of forest land in the companies' balance sheets. By 1977 the net average debt of the Finnish companies was greater than their annual sales while the Swedish companies had a debt ratio of around two-thirds of sales compared with the 30 per cent of the North American companies. To balance the liabilities in their balance sheets the Finns have written up the book value of

Pöyry's charts do not adjust sufficiently for the differences in accounting methods in the Nordic countries and in North America. They also depict an average while several Swedish and Finnish companies, particularly those that invested in the right moment in the business cycle, have the financial strength to underpin their confidence in the future. All the same, Pöyry's study helps to explain the pressure for greater state involvement.

The Nordic mills' dilemma lies in the conjunction of high wood prices and a low dollar rate. (All the pulp and about one-third of paper and board products are tied to dollar prices.) Wood costs have been inflated by several political and social influences, including the intention to keep farmers' living standards commensurate with those of industrial workers, high taxation, and changes in ownership patterns. Particularly in Finland these have resulted in forest land becoming a secondary source of income rather than a primary one.

Even for those Swedish companies, which possess substantial forests of their own, high labour costs and the heavy investments in mechanisation make wood

Nordic mills' lower transport costs to the European market.

The mills have been helped by the devaluation of the Swedish krona in August 1977 and of the Finnish mark in February of last year. As the sources of the largest net export incomes of both countries they would prefer their Governments to operate more flexible exchange rate policies, but the requirements of other industries and the need to contain inflation make consistent devaluation policies impossible.

The logic of the situation calls for the mills to exploit the quality of their long-fibre wood by producing paper and board varieties which require a higher degree of processing. Printing papers are one example. Thermomechanical pulp offers a more efficient use of the wood than does chemical pulp, but it also takes far more energy. Both courses would involve heavy capital investment and the production of higher processed paper raises a delicate trade issue. The European paper makers already complain that the Nordic mills sell them expensive pulp at the same time as they hold down the prices of their competing paper products.

Any Swedish or Finnish company investing in a new paper product will insist that it does

the capital needed to keep their plants competitive. This year promises much better profits, but more than one good year is needed to restore the finances of many companies. Dr. Klaus Waris, a former governor of the Bank of Finland, recently calculated that Finnish pulp and paper mills needed a capital injection of Fm 8bn (£730m) just to consolidate their finances at the Swedish level. With interest charges on their debts averaging roughly 10 per cent of their sales few Finnish companies were in a position to invest.

If devaluation is discarded as a solution, the tax reliefs which the industry has been urging the Finnish Government to provide would be insignificant compared with Dr. Waris's figure. The abandonment of turnover and energy taxes would give the companies Fm 800m a year. The new Government to be formed after the general election will have to concern itself seriously with the capital problems of the forest industry.

So far only one company, Kemira, has been taken over under a formula which left the State holding 49 per cent, and the Bank of Finland 3 per cent, and the commercial banks the remainder. But a large part of the industry already has bank loans granted to it well beyond

## MEN AND MATTERS

Getting on the inside track

Industrial spies, according to a Thames Television programme being broadcast tonight, have shed their binoculars and come in from the cold. No longer content with the inconspicuousness of burglary and microfilming, today's industrial spy is disguised as a market researcher.

Using a variety of "platforms" (poses), these "researchers" will rarely disclose who their real clients are. Having gained the confidence of a company—on the basis, perhaps, of representing Canadian health food stores or Yugoslav banana importers—they report back what they have gleaned to principals who may be rivals or companies intent on a takeover.

Such, at least, is the sinister picture being presented by Inside Business, a programme which, it must be said, has a reputation for doing its homework. One of the results has been a fat dossier, naming names, which has been examined by a select band of British Institute of Management officials. Yesterday, the BIM admitted to me, "some" of the companies named were members and "the sort of people who would not want to be identified with this sort of operation." Although the BIM co-operated with the programme, it was not, however, going to be involved in a witch-hunt, and had no idea how widespread the practice was.

Anxious to steer a course through the libel minefield, Inside Business has also avoided publicly naming names, but reporter Peter Gill tells me: "We are totally confident of our sources because they have provided chapter and verse." The programme includes an interview with a victim.

At least two of the market research companies named in the dossier are fairly large and well-known, but yesterday the industry poured a steady stream of cold water over the notion that it was making espionage

respectable. Bill Schlackman, chairman of one of the larger market research companies, told me he might well use "indirect methods," such as having someone stand outside a warehouse to count the lorries going in and out.

But unethical methods were not worth the risk to above-board companies. The most popular and effective illicit way of gaining information, says Schlackman, is still getting your own man into a company, employing the accountant, or hiring a key executive. "That is what I would do, if I were in industrial espionage—which I am not."

The paper has been remarkably frank about the results of a poll taken among 2,100 young men and women by a Marxist study centre. Fifty per cent of those questioned said they would like to live in a western country; only nine per cent opted for a communist country; and one-third were discreetly without an opinion.

When asked specifically where they would like to live purely on the basis of the social system, 31 per cent were for socialism and 29 per cent spoke out for capitalism.

This rather narrow margin, coming from a generation raised under Tito's relatively free-wheeling ideology, was described by Borba as "deeply contradictory," since the kind of country the young people wanted just did not exist, it was essential to look for "compromise solutions." The paper might also have added that no other communist country would have published such a poll.

**Gone missing**  
A recent happening at the National Army Museum in London demonstrates the effect the soaring value of historical manuscripts is having upon major public collections. In December, the papers of General Sir Eyre Coote (1728-1823), which had been on loan to the museum, were withdrawn by the owner and put up for auction. They were sold earlier

Office told me smuggly, adding that it is still not entrusting the wages to the post—the work-force is paid in cash or by direct debit.

**Opting out**

The younger generation in Yugoslavia thinks the ideal place to live would be Switzerland run on socialist lines. This fairly ambivalent desire has just been revealed in Borba, the Belgrade daily which speaks for the ruling League of Communists.

The paper has been remarkably frank about the results of a poll taken among 2,100 young men and women by a Marxist study centre. Fifty per cent of those questioned said they would like to live in a western country; only nine per cent opted for a communist country; and one-third were discreetly without an opinion.

When asked specifically where they would like to live purely on the basis of the social system, 31 per cent were for socialism and 29 per cent spoke out for capitalism.

This rather narrow margin, coming from a generation raised under Tito's relatively free-wheeling ideology, was described by Borba as "deeply contradictory," since the kind of country the young people wanted just did not exist, it was essential to look for "compromise solutions." The paper might also have added that no other communist country would have published such a poll.

**Rhapsody in blue**  
People who sell houses often engage in flights of fancy but an advertisement in the Herald Tribune for a South Wales property (asking price £100,000) takes some beating. It begins: "SWANSEA, the British Cote d'Azur. Substantial luxury residence."

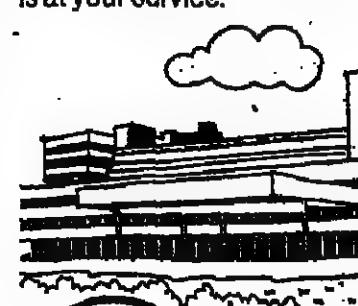
## Come to Corby where the growing's good.

If you're looking for a place to re-locate or expand your business, the New Town of Corby has got so much going for you.

Corby is situated in between the motorway junction of the M1 and M6 to the west and the A1 to the east, allowing access to London and Birmingham. The East Coast ports can be reached by major roads.

What's more, Corby is young enough to be vigorous and exciting—with modern factories ready for you to occupy at highly competitive rents. (Our "design and build" service will help you plan your own specification.) But Corby is mature enough, too, to offer well-established housing, schools, shops, public services, leisure activities. And skilled and unskilled labour is readily available.

Many companies have already put down roots in Corby—with success. Why not join them? Our experienced help and advice is at your service.



## Corby

For a fully detailed brochure on Corby contact K.R. Jones & A. F.R.I.C.S. Chief Estates Officer, Corby Development Corporation, 9 Queen's Square, Corby, Northants NN17 1PA. Telephone (053 66) 3535.

Observer



# The dubious case for import controls for all

IN INCREASING number of people have been asking me: "What is wrong with the Cambridge view that dramatic steps must be taken to stop the flood of imports? At recent rates of import growth, what remains of the British industry will be destroyed and the UK will become a giant depressed area with 3m or 4m unemployed, or so disguised."

What is wrong is the complete absence of any explanation of the malaise or any convincing reason to suppose that if the British economy is as weak as the Cambridge Group supposes, it would not decline still further behind a high—and on Cambridge's own logic—an increasing barrier against the rest of the world.

But until recently there has been a more basic objection to a whole Cambridge method of analysis. Just as Lenin spoke of "socialism in one country," the Cambridge analysis started off as "economics for one country." These particular criticisms have now been taken on board: although I still believe the analysis to be profoundly misguided, the group can no longer be accused of insularity. The Cambridge Economic Policy Review, published today by the Clarendon Press, is based on analysis of the whole world economy. Indeed because of the spurious boost from North America, Britain's own economy is projected until the 1980s and then 1978 and 1980, the UK national product is expected to grow at almost normal rates of little over 2 per cent per annum.

The country which is now led upon to initiate the move into import controls is the US, which had a current account deficit of nearly \$20bn in 1978—deficit which according to the

Cambridge writers threatens to reach over \$70bn in 1985 (in constant dollars of 1975 value).

It is not enough to gulp with amazement at these findings because the numbers are large. People did this when the Cambridge Group predicted 11m unemployed in the UK. What is required is a scrutiny of the basic picture of the world underlying the recommendations.

This is dominated by two supposedly "robust" and persistent tendencies: the increase of the U.S. current deficit and the obstinately growing Japanese current account surplus. The latter is projected to grow from just under \$20bn last year to around \$40bn in 1985 (in constant 1975 dollars) even assuming pretty dramatic changes in policy by Japan and other countries. The growth of the world economy in general and the U.S. economy in particular are being "constrained" both by the need to keep imports from Japan down and the U.S. overseas account in balance.

In the "worst case," with balance of payments equilibrium achieved by so-called U.S. "deflation," growth in the non-Communist world declines from a 5 per cent per annum average in the 1965-73 period to just over 2 per cent in 1978-85 with, just to cheer us up, the U.S. national product falling on average by over 1 per cent a year. The pessimism expressed about the ability of exchange rate changes to correct the U.S. and Japanese balance of payments is similar to that expressed in earlier Reviews in the case of the UK.

The ideal policy measures prescribed by the Cambridge Group are import restrictions by the U.S.—together with a few other structurally weak countries such as the UK, and

a "sharp reduction" in Japanese exports by means not explained, but implying either export ceilings set in Tokyo or discrimination against Japan by the rest of the world. Third, and for good measure, there should be positive discrimination in favour of imports from developing countries by countries with structurally strong trade balances.

The programme differs from several important respects from the conventional demands of those afraid of world recession. With the emphasis now on Japan rather than Germany, little reliance is placed on calls for more rapid expansion of domestic demand by surplus countries. This is because Japan's import propensity is so low that it has little "locomotive power" for world trade. The Cambridge authors also place much less emphasis than others have done on oil prices and the OPEC surplus.

## Little faith

On the broader world picture they put little faith in co-ordinated summit action. They stress that if the U.S. deficit is frozen at its 1978 level and import controls are simply designed to prevent it becoming larger, then other countries have no cause for complaint. The purpose of the controls would be as an alternative to a slump in the U.S. Imports would be just as large as without the controls, but with a higher level of domestic activity.

The Cambridge analysis can be summed up in the first of the accompanying tables. This shows a persistent decline in the U.S. share of world trade in manufacturing between 1961 and 1978, a rise in the Japanese share, and a dramatic rise in the share of manufactured imports

to GNP in the rest of the world of the developed world outside Japan (but not incidentally much larger in the UK than in other countries). These trends were worth extracting, whatever inference one draws from them.

The whole Cambridge analysis stands or falls, however, on two propositions:

(1) That the trends of the last two decades will continue and that nominal price mechanism adjustments through exchange rate changes or differential wage growth are powerless to stop them; and (2) That the constraints on growth in the non-Japanese world are due to demand and not supply. For if the non-Japanese economies have already been growing as fast as is possible without overheating, bottlenecks, and the risks of accelerating inflation (and in the case of the U.S. economy growing rather faster) then the trends shown in the table reflect underlying performance and are not a source of world depression.

A third subsidiary assumption is that capital flows can play no major role in balancing world payments. This is maintained despite the fact that in 1978, net long-term capital exports from Japan offset some three-quarters of that country's current surplus.

The obvious source of doubt about the whole Cambridge diagnosis is the attempt to build iron laws on the experience of 1961 to 1978. This is a very short time indeed in modern economic history; and before one could dream of basing policy recommendations upon them, one should at least wait to check up on the earlier decades of this century.

Indeed, the Cambridge authors themselves recognise

## TRADE IN MANUFACTURES

	Shares of world trade in manufactures (%)			Ratio of volume of manufactured imports to GNP		
	1961	1969	1978	1961	1969	1978
UK	12.7	8.6	7.0	4.6	8.0	14.2
Rest of EEC	33.9	35.0	37.1	6.1	10.1	15.8
U.S.	17.9	15.5	11.5	1.5	3.4	4.5
Japan	5.0	8.3	11.5	1.8	2.2	2.4

Source: Cambridge Economic Policy Review

## GNP GROWTH RATES

	1965-73 (% per year)			1973-75 (% per year)			1975-78 (% per year)		
	1965-73	1973-75	1975-78	1965-73	1973-75	1975-78	1965-73	1973-75	1975-78
U.S.	3.7	-1.1	5.4	3.7	-1.1	5.4	3.7	-1.1	5.4
Japan	10.0	0.1	7.5	10.0	0.1	7.5	10.0	0.1	7.5
EEC	4.5	-0.2	3.1	4.5	-0.2	3.1	4.5	-0.2	3.1
Other developed market economies	5.3	1.9	2.8	5.3	1.9	2.8	5.3	1.9	2.8
Subtotal	4.9	-0.2	4.5	4.9	-0.2	4.5	4.9	-0.2	4.5
OPEC (excluding net fuel exports)	8.3	8.1	4.7	8.3	8.1	4.7	8.3	8.1	4.7
Other developing market economies	5.2	2.2	5.0	5.2	2.2	5.0	5.2	2.2	5.0
Subtotal	5.9	6.7	4.9	5.9	6.7	4.9	5.9	6.7	4.9
World total (excluding centrally planned economies)	5.1	1.0	4.6	5.1	1.0	4.6	5.1	1.0	4.6

Source: C.E.P.R.

that they might have made an opposite diagnosis in the earlier postwar years by referring to the supposed dollar shortage of that period. At that time economists of a "structuralist" bent made exactly the same points as their present-day successors, but with the plus and minus signs reversed. The Americans were then supposed to be suffering from a structural trade surplus which no amount of effort or exchange rate adjustment on the part of other countries would overcome. Present theories about the case for stopping Japanese exports are identical to the postwar arguments for discriminating against the U.S. on the ground that this would involve a smaller degree of total restriction. The whole

Cambridge case is the old "dollar shortage" argument stood on its head.

On the other hand a great deal that is puzzling in the Cambridge figures disappears if one takes the view that the growth of output is much more supply constrained than it is demand constrained.

Supply constraints would also explain why the Cambridge statistical simulations show devaluations producing so much inflation and so little real change in trade patterns.

It is now at last respectable to talk of the vast number of tasks—not only in the South-East of England—for which workers simply cannot be found at current wages. In the U.S. during the same period that the

Carter Administration—and before it the Nixon one—was stimulating U.S. demand because of the overall unemployment percentages, millions of Mexican and other workers entered the country illegally; and a blind eye was turned because many U.S. services would grind to a halt without them. In these conditions a demand boost backed by import controls would produce little but shortages and inflation.

Many of the Cambridge authors are as shrewd as anyone else in observing what goes on around them. But they are hooked on aggregates and trends in a way which does not allow them to integrate their everyday observations with their professional work.

The Cambridge Group sees a world of countries each with certain unalterable propensities. But why stop at national frontiers? Within countries some regions are falling behind others in the production and sale of tradable products. If present trends are projected regional differences will also grow inexorably; and regions, unlike countries, cannot even adjust exchange rates, or impose import controls. Most of the Cambridge economists concerned are strong supporters of regional policy and would be opposed to the EMS even if there were a prospect of a common European currency and a European Federal Reserve.

The underlying attitude reflects a deep-seated conservatism. Different compound rates of growth of anything anywhere are projected indefinitely, and found intolerable. Therefore political authorities are asked to intervene by force majeure to stop them. There may be social reasons for slowing down relative changes, but it is

strange to do so in the interests of world growth.

Two final points. First, the Review points out that world problems would be eased, although not eliminated, if there were more toleration for a U.S. current account deficit. The point could be taken much further. For the much-feared Japanese export surpluses would do more good than harm if they were offset by long-term overseas investment. This would enable other countries—say in the developing world—to run trade deficits and buy more, thus removing the alleged restrictive effects of the Japanese reluctance to import.

But the Cambridge writers are in a poor position to make such points. For they belong to a family of analysts who have always stressed and publicised the current balance of payments. It is the market economists and monetarists on whom so much scorn is poured, who have always been suspicious of meddling over the current account for special attention and who have never seen any isolated part of a country's overall payments should balance in isolation.

Secondly, the reason the Cambridge Group is worth attention, apart from its useful quantification of very recent economic history, is that it carries to their logical conclusions, beliefs and assumptions held by a great many "practical" people who would run a mile from any association with economists who provide a basis for Mr. Anthony Wedgwood Benn's platform. But unless the underlying beliefs and assumptions are challenged, there is no point in quibbling about the arithmetic or recoiling in horror from its apparent extremity.

Samuel Brittan

## Letters to the Editor

### Bacon and the MCA system

As the General Secretary, Association of Professional, Technical, Clerical and Amputee Staff, I am writing to you in connection with the Danish Minister of Agriculture, March 20, stated "as long as monetary conditions exist, nobody can deny that they are a subsidy to consumers of the countries with a depressed currency for example UK. Prices are kept down, a statement is true as far as it goes but it assumes that the subsidies are fair in the first 50 per cent to 100 per cent higher than current world prices. So the MCAs only rate to reduce the impact on farmers of the agricultural subsidies set by the farm Ministers the benefit of farmers with regard to the interests of consumers."

his union has always stood membership of the European Community and has consistently fought to bring the CAP on to a realistic basis on which it will be the interest of the Community as a whole rather than 6 per cent who happen to be farmers. It is significant that 6 per cent who are unemployed receive next to nothing in the Community. The principle of customs on which applies to all agricultural products in the Community is an equitable one since internal competition is fair and external competition is protected wherever it can overcome price disadvantage caused by export duties. In agriculture community duties this principle in the name of "community preference." Overseas producers are denied access to affluent parts of the market and then suffer from subsidised exports by the community—all at the expense of the consumer. It is significant that "community preference" does not extend to British coal if our own community members can chase it cheaper from abroad or Australia; or to Rolls-Royce engines if the French or Germans can be American subcontractors.

was always known when Eire joined the community that in five years there would be significant changes in rules if a position of inequity was not to arise and the leaders he six signed a declaration: if the fundamental interest of our country were jeopardised, changes would be made. It is to the lack of statesmanship among the European leaders that a handful of farmers have effectively vetoed initiatives for change. The European Trade Union Federation has, for a number of years, demanded "a community with a human face" one which is organised in the interests of consumers and workers rather than just farmers and employers. The letter taken by Mr. Callaghan to the Paris meeting will be welcomed by all those who support Europe that is facing the bleakness of today rather than the bleakness of the 1930s.

A. A. Grantham, Worples Road, SW19.

### Brewers' gifts to Tories

Mr. C. Mitchell, I read with great interest that the Transport and General Workers' Union is to raise £150,000 to the Labour

Party's election fund and found it interesting to compare this with amounts that the UK brewing industry is reported to have donated to the Conservative Party. Many members of the Labour Party adopt the view taken by Mr. William Hamilton, who, in discussing beer price increases, said in the House of Commons in January this year: "The brewers want the 3p on the pint because they wish to contribute to the Tory Party's election coffers as they have always done magnificently."

As a matter of interest, a random sample of 10 brewery companies (large, medium and small) shows that total political donations in 1968 were less than £30,000 but last year were £23,000. One wonders whether Mr. Hamilton might now feel differently on this issue. C. D. Blithel, Buckenham and Moore, The Stock Exchange, EC2.

### Revenue from invalids

From Mr. J. Shaffner, Sir—If an employer arranges a group health scheme for his employees, the premiums are usually allowed as a business expense and so are offset against corporation tax. In the event of a claim, the benefit is paid to the employee who in turn pays it to his employer. For tax purposes, it is treated as earned income in the hands of the employee and the normal rules of taxation apply. Contrary to this, with the employee or the self-employed, for whom no company scheme is available: if such people arrange their own PHI contracts, the premiums do not qualify for personal tax relief and the benefits, after one fiscal year's payment, are then treated as unearned income. This latter position is the worst anomaly, kicking the long-term invalid when he is down.

Clearly, it is time that the Treasury stopped looking to the long-term invalid as a source of additional revenue, in the form of investment income surcharge, just because that invalid would be providing enough to insure his own health, when younger and fitter, rather than rely on claiming supplementary benefits.

How many employers can afford sick pay for their unfortunate staff who are disabled by sickness or accident indefinitely? In truth most working people need this protection of their income, but the Treasury's inequitable treatment does nothing to encourage people to make any provision for themselves. Removal of these anomalies is long overdue.

J. R. Shaffner, Charles Stapleton and Co., Cameron House, Church Street, Leatherhead, Surrey.

### Roads and taxes

From Mr. D. Lindsay, Sir—Dr. Potter's logic (March 21) is no easier to follow than his economics. The losers from the suggested changes in the car licence and fuel taxes will overwhelmingly be country people, and the gainers overwhelmingly townspeople, and I am not aware of any significant correlation between the former and "rich" or "poor." Even if there were, that fact would lend no support to the proposed change. Redistribution of income is not the function of these taxes. My point on the car licence tax was that all car owners

should make a fixed annual contribution to the capital costs of the road programme; that purchases "ready availability," a valuable commodity. In addition they pay a fuel tax which, roadside gauging apart, bears a very close relation to the actual use of the roads. The Post Office has the right "two-pot tariff" idea in its telephone charging.

David G. Lindsay, 5, Stroudham Field, Whitechurch-on-Thames, Oxon.

### Equity in homes

From the Joint Chairman, Conference of Private Residents Association, Sir—In his report (March 28) on Gibson v City of Manchester Justices asks whether tenants should have "positive rights, powers and responsibilities over premises which, after all, are their homes for life." This kind of new thinking is needed in housing politics in both public and private sectors.

To give equal opportunity to all (for saving mobility, real security, independence) tenants could have an option to purchase an equity stake in their homes either as part of the rent paid or as an additional contract.

Housing politics are plagued by antiquated divisions of attitude when there are many additional forms of tenure which could be introduced and Britain lags behind other Western countries in this outlook. Private tenants in blocks of flats need to have a stronger security and an equity stake in their individual homes, for very good social reasons and, in long-term blocks, they need the right to purchase the residual freehold interest in a co-ownership company because it is now all their money which is being spent on maintenance and repair.

Partial equity schemes could have a number of financial and social benefits in the public sector. In the private sector it would encourage the legitimate landlord and discourage the investment speculator. It may even provide a formula for viability in building new blocks of flats needed to repopulate inner urban areas once again with mixed young communities. Frank Brown, 59 Drayton Gardens, SW10.

### The housing Bill

From Mr. R. Jensen, Sir—The description "election window-dressing" attributed to the Conservatives in respect of the Government's Housing Bill (your report, March 23) is certainly justified in the context of the security of tenure provisions for council tenants. Any suggestion that such security is either something new or the logical extension of a situation which applies throughout most of the private sector, is quite unsupported. Only in the most exceptional circumstances (which would have produced exactly similar results in the private sector) has the council tenant ever been dislodged from his council house or flat and, in this respect, his circumstances have in no way differed from those of the private tenant. The security of tenure clause of the Rent Act has connotations for the private tenant which are totally irrelevant in the public sector. Namely, the prime function of that clause has been to ensure that the tenant (trapped) private landlord cannot opt out

of his enforced charitable role of providing, from his own pocket, subsidies ranging up to 90 per cent plus (in the case of controlled tenancies) for his tenant and (in turn) the tenant's children and grandchildren in the public sector. Of course, these subsidies are provided by design (and, in my own borough, were predicted to cover almost 75 per cent of housing costs in 1978-79) and not by compulsion.

Security of tenure, per se, is seen to be equally irrelevant in the private sector where, nowadays, it is merely a device for effecting the permanent enforcement of grossly repressed rents. In successfully procuring that objective, it has simultaneously ensured both massive under-occupation on the one hand and homelessness, overcrowding, and inadequate housing on the other. R. Jensen, 11, Stanhope Gardens, N4.

### Building labour

From the Director, Federation of Associations of Specialists and Sub-contractors, Sir—Mr. D. Brown (March 23) is right to warn against possible dangers inherent in a move towards construction industry registration, but he is wrong in his suggestion that the Construction Industry Manpower Board is currently preparing a full "Docks Board" form of registration, with direction of labour and employment by the industry.

The Manpower Board is currently attempting to draw up proposals for an acceptable minimum form of registration of employers. Problems have arisen, notably from the unwillingness of the bodies representing main contractors to take realistic account of the interests of the substantial number of specialist and sub-contractor firms in the industry and to accept changes in the industry's industrial relations machinery made necessary by the concept of registration.

If these problems can be remedied then it is certainly possible that a widely acceptable form of registration could be conceived that would both satisfy trade union aspirations in this direction and bring under some measure of control the "cowboy" elements to which Mr. Brown refers. If however, the main contractors' organisations are unable to take a sufficiently wide view at this stage, then we may yet have the full rigours of Mr. Brown's "worst case" form of registration forced upon us. John Huxtable, 376 Grays Inn Road, WC1.

### Advertising on the BBC

From Mr. R. Brooks, Sir—I fully support the letter from Mr. R. Ernest (March 15). The local radio station—BBC Radio Commercial—in my area is Radio Medway and it regularly includes the promotion of special trips by British Rail. These "promotions" are usually in the form of an interview with the local BR manager who lists holiday excursions, etc. I wonder what would happen if the rest of the Radio Medway area travel firms requested equal air time? Robert Brooks, 13, Freeman Way, Maidstone, Kent.

## Today's Events

GENERAL: UK: Edge Hill, Liverpool, by-election.

National Housebuilding Council statement on prospects for 1979.

Sir Derek Ezra, NCB chairman, gives Institute of Fuel lecture on need for energy insurance policy, at Royal Institution, London.

Mr. Ron Hayward, Labour Party general secretary, speaks at Luton Labour Party meeting. Midyear international finance and economic outlook conference, Hilton Hotel, London—speakers include M. Pierre Leduc, president, Banque Nationale de Paris, and Mr. Paul Nield, partner, Phillips and Drew.

Sir Kenneth Cork, Lord Mayor of London, receives Portuguese parliamentary delegation, Mansion House; luncheon with British Waterways Board on M.V. Lady Rose of Regent, Little Venice. The Queen and Duke of Edinburgh attend International Skating Association centenary gala, Wembley, London.

Overseas: International Energy Agency governing board, meeting in Paris, reviews plan to cut oil consumption by 5 per cent.

President Anwar Sadat of Egypt stops in Bonn on way home from U.S.

OFFICIAL STATISTICS: Department of Industry publishes fourth quarter final figures for finished steel consumption and stock changes. Department of Energy publishes latest energy trends.

PARLIAMENTARY BUSINESS: House of Commons: Independent Broadcasting Authority Bill, remaining stages. Debate on White Paper on Broadcasting. Motion on BBC supplemental licence agreement and Royal Charter.

House of Lords: Exchange Equalisation Account Bill, third reading. International Monetary Fund Bill, third reading. Prsecution of Offences Bill, third reading. Public Health Laboratory Services Bill, Commons.

amendment, Caravan Sites Bill, committee. Cinematograph Films (Limits of Levy) Order.

Select Committees: Science and technology, genetic engineering sub-committee. Subject: Genetic engineering. Witness: Mr. David Enns, Social Services Secretary, Room 16, 4.30 pm.

COMPANY RESULTS: Final dividends: APV Holdings, Bidders Stores, BICC, Biddle Holdings, Booker McConnell, British Mohair Spinnings, Bruntons (Musselburgh), forecast second interim, at time of interim report, is 4.375p. Coates Brothers and Co. Desouter Brothers (Holdings), Alexander Howden Group, Jamesons Chocolates, Percy Lane Group, Leyland Paint and Wallpaper, 1977 period consisted of 15 months to December 31, 1977, and final dividend includes a second interim of 2.3p.

Magnolia Group (Mouldings), Bernard Matthews, Mixconcrete (Holdings), News International, Austin Reed Group, Solicitors' Law Stationery Society, Woistons, 12.30.

holme Rink. Interim dividends: Lucas Industries, Radley Fashion Group, Wombwell Foundry and Engineering Co. Interim figures: Laganvale Estate, nine months figures.

COMPANY MEETINGS: Aaronson Brothers, Savoy Hotel, WC, 12. Clifton Investments, 32, Savoy Row, W, 11. Denston Commercial Investments, 117 Old Broad Street, EC, 2.30. General Consolidated Investment Trust, 8 Waterloo Place, SW, 3.45. Lloyds Bank, 71 Lombard Street, EC, 3. Newbold and Burton, Premier Works, Brook Street, Silbury, Leicester, 10.30. River and Mercantile Trust, 44 Bloomsbury Square, WC, 2.45. River Plate and General Investment Trust, 44 Bloomsbury Square, 11.15. Taverner Ruledges, Adelphi Hotel, Lime Street, Liverpool, 12. Temple Bar Investment Trust, Electric House, Temple Place, Victoria Embankment, 11. West Coast and Texas Reg. Investment Trust, 20 Birch Lane, EC, 12.30.

## Meet the Royal Mail Marketing Team



## 19,000,000 more parcels.

That's the new business we've signed up in the last twelve months from people like Scotts, Argos Distributors, IPC Magazines, Hoover Ltd., Sutton Seeds, Black and Decker, to name but a few. And hundreds more companies, large and small are doing business with the Royal Mail marketing team.

They are turning to us because we offer nationwide delivery every weekday including Saturday, high reliability and the right service at the right price.

In addition—Local Delivery with the minimum restriction on packing and dimensions. Zonal delivery at reduced rates through County Parcels. Datapost the premium service providing secure overnight delivery and an ultra-fast international service. Night-rider for overnight collection and early delivery in the Greater London area. And a wide range of international parcel services.

We can help you collect money more quickly, record delivery, even cater for the return of goods sent

on approval. And you can use any of our inland services combined under one or more contracts, which can save both money and administrative effort.

Isn't it time you looked again at Royal Mail Parcels? Return the completed coupon and we will rush it to your Regional Marketing Manager or ring FREEPHONE 2325.

## Royal Mail Parcels

Return this coupon to: The Royal Mail, FREEPOST, Room 454, Post Office Headquaters, St Martin-le-Grand, LONDON WC2N 7LH (no postage need be paid)

Please ask one of your marketing team to contact me. Please send me more information about Royal Mail parcel services.

Name  Position

Company

Address

Postcode  Telephone No.

FT29.3/MS

"We mean business"



# New-style 'Pru' lifting dividend by 20% to 8p

PROFITS IN 1978 up by 29 per cent and a 20 per cent increase in dividend are the main features of the first report of the Prudential Corporation—the new style holding company of the Prudential Group of companies.

Profits for the year amounted to £41.2m compared with £31.9m in 1977. In view of these excellent results, the corporation has taken advantage of relaxations on dividend limitations given to new companies to pass on the benefits to shareholders. A final dividend of 8p per share has been declared, making 8p for the year, compared with 6.64p in 1977.

The surplus from the life fund attributable to shareholders rose by 8 per cent from £15.5m to £17.2m. This improvement was, however, held back in 1978 by a non-recurring loss of £2.4m in Vanbrugh Life, the linked life member of the corporation. This loss occurred because of an error in the unit pricing calculations and the strengthening of reserves. Overall, life premium income advanced by over 11 per cent to £76.1m and the surplus attributable to policyholders by nearly 13 per cent to £28.5m. This enabled policyholders' bonus rates to be increased, details will be given today.

Gross underwriting losses on general insurance business were halved in 1978 from £9.5m to £4.2m, while investment income improved by 16 per cent from £23.4m to £27.2m. The tax charge was doubled to £6.5m so the net surplus from general insurance business advanced by over 50 per

## HIGHLIGHTS

The swift counterbid for 51 per cent of Hudson Bay from George Weston at \$41 per share is discussed by LEX, as are slightly disappointing annual results from Schroders, solid growth from Legal and General, and a buoyant performance from Prudential Corporation. The West German banking sector's close ties with industrial companies are also considered. Other companies reported mostly encouraging results and prospects with Slough Estates, Banners Stores and Hanger Investments well to the fore. York Trailer and Rotork comprised the major exceptions where the combined effects of sluggish market conditions and high sterling values have taken their toll. On the bid front, Rockwell stressed that it is not prepared to raise its 115p per share offer for Wilmot Breedon.

Cent from £10.4m to £16.2m. Premium income was 10 per cent higher at £34.9m.

The underwriting result of the Prudential Assurance showed little overall change from 1977. Losses in the UK account deteriorated by £2m from 'adverse' results on motor and liability business. The domestic account showed some improvement despite the combination of underinsurance and adverse weather conditions, but even so a loss of £4.5m on this account was recorded. There was an underwriting profit of £2m on overseas business, coming mostly from Canada, with trading conditions in Australia and South Africa remaining very difficult. The trading profit of L'Escout showed little change, a deterioration in underwriting being balanced by

higher investment income. There was a large increase in business in Holland which was profitable. The underwriting results for the reinsurance subsidiary, Mercantile and General, showed improvement for both proportional and non-proportional fire and marine and aviation accounts. The improvement accounted for most of the reduction in underwriting losses.

The growth of income and profits last year would have been higher but for the strengthening of the sterling exchange rate. The sterling margin at the end of 1978—the total free assets of the insurance subsidiaries as a percentage of general insurance premium income—stood at 54 per cent.

See Lex

## UK COMPANY NEWS

# L & G restructuring to meet needs of 1980s

PLANS HAVE been formulated by Legal and General Assurance Society, the second largest life group in Britain, for reorganisation of its structure.

A new company is to be formed as parent of the group and named Legal and General Group. It will not be an insurance company. Shareholders will exchange their present 5p shares in the society for 25p shares in the new company on a one-for-one basis.

Then at the second stage, it is proposed to separate the UK insurance operations, the international insurance operations and the investment management activities into three subsidiaries of Legal and General Group.

Mr. Ron Peet, the chief executive of L and G, said that the new structure should help provide the right environment for the development of the group through the 1980s. The reorganisation under a non-insurance holding company would give additional financial flexibility, and provide the opportunity to manage the group's resources more effectively through the clearer identification of the different activities in separate subsidiaries rather than through one major operating company.

Shareholders will be asked to

approve the first stage of the reorganisation by means of a scheme of arrangement at the AGM. The split into separate subsidiaries will come into operation in January 1980.

Pre-tax profits of the group rose by nearly 20 per cent in 1978 from £17.4m to £20.8m. Premium income on life and pensions business advanced 18 per cent to £47.8m. Total surplus from long-term business amounted to £76.1m compared with £56.4m in 1977. Out of this amount £50.6m has been allocated to policyholders' bonuses, £9.2m to shareholders and £6.3m earned forward. The shareholders' allocation has been raised by 13 per cent over the 1977 figure.

Premium income on general insurance business increased by just over 6 per cent to £31.9m in 1978. The underwriting loss rose sharply to £6m against £3.9m in 1977. The UK account showed a marginal loss after a release of £2m from provision for unearned premiums. Elsewhere the results were poor, particularly so in Australia with a loss of £2m, France and Spain.

Investment and other income was nearly 30 per cent higher at £20.8m compared with £15.9m. The tax charge in 1978 rose significantly to £7.7m compared with £5.7m in 1977 and minorities where unchanged at £200,000.

So the group operating profit improved by 5 per cent from £14.2m to £14.9m.

The final dividend is £2.77p per share including an additional payment of 0.083p for 1977. This gives a total gross equivalent dividend for 1978 of 2.77p against 2.73p in 1977. This is the maximum increase possible.

Higher rates of reversionary and terminal bonuses have been announced by L and G. On whole life, endowment and cash-builder policies the rate on the basic sum assured is maintained at £3.50 per cent. But the rate on attaching bonuses is lifted to 55 per cent from 45.50 per cent. On self-employed personal pension policies, the reversionary bonus goes up to 54 per cent from 48 per cent, while on the HPIS executive pension schemes it is lifted to 31 per cent from 24 per cent.

Terminal bonuses, payable on death or maturity claims, are increased to 30 per cent of attaching bonuses for whole life and endowment contracts and to 25 per cent for the cash-builder plan. The bonus rate on executive pensions is increased from 25 per cent to 30 per cent, but the rate on attaching bonuses is dropped from 44 per cent to 30 per cent, a result of beneficial bunchings of industrial building allowances, deferred tax benefits, and Slough's ability to shelter itself to a degree from overseas losses.

See Lex

# Slough Estates exceeds £8.2m

ON HIGHER rental income at home and overseas, Slough Estates, property developer, lifted taxable profit in 1978 by £1.26m to a record £8.23m with a £0.62m advance in the second half.

New lettings, reversions and rent reviews expanded UK rental income from £10.57m to £12.76m and overseas rental income was £0.53m higher at £4.57m.

Record profit was forecast at half-time when the surplus was ahead to £3.79m (£3.15m). The company is now predicting another good year in 1979.

Tax in 1978 took £2.44m (£3.41m) leaving stated earnings per share 1.59p better at 6.21p. Also as forecast, the net total dividend is stepped up to the maximum permitted to £2.2225p (£2.265p) by a 1.5225p final one-for-two scrip issue is proposed.

As 15 per cent improvement in pre-tax profits, substantial as it is, is not the reason Slough Estates' share price rose 5p yesterday to 162p for the group is expected to be one of the top performers of the sector. In the first place the tax charge has dropped from 44 per cent to 30 per cent, a result of beneficial bunchings of industrial building allowances, deferred tax benefits, and Slough's ability to shelter itself to a degree from overseas losses. Secondly, the ratio of pre-tax profits to gross rental income has begun to rise to 47 per cent from under 46 per cent—after several years of decline. Slough is to revalue its properties this year, probably in time for the next preliminary figures. Since the UK properties were last valued three years ago in a depressed market, and the Canadian properties even before that, the potential uplift is considerable. No wonder the market is not deterred by a yield of less than 3 1/2 per cent.

J. LYONS, Breweries, has announced that at the separate meetings yesterday of the holders of the 6 per cent mortgage debenture stock 1982/85 and of the 8 per cent

unsecured loan stock 1983 of J. Lyons and Company, the resolutions approving repayment at 800 per cent and 800 per cent respectively (in both cases together with accrued interest) were duly passed by the requisite majorities.

Stockholders can expect to receive cash payments on April 17.

## Manders nears £3.5m

THE TREASURY has approved a 30.4 per cent increase in the dividend of Manders (Holdings), which turned in taxable profits of £3.44m in 1978 against £2.37m last year.

Turnover of this paint and printing ink manufacturer advanced from £24.07m to £28.2m.

The improved results are principally due to the increased turnover and restored margins of the decorative division. UK ink operations were maintained at the improved levels, and the industrial finishes division doubled trading profits.

Overseas ink operations were less satisfactory, the director says.

After tax of £1.06m (£0.8m), stated earnings per 39p share are higher at 15.82p (11.9p). The total net dividend is stepped up from 2.5425p to 3.514p, with a 2.41p final dividend.

A breakdown of turnover shows UK trading operations at £24.1m (£20.24m), and overseas £3.8m (£3.83m). Taxable profit is shown as to UK trading £2.66m (£1.6m), overseas £0.3m (£0.33m) and UK property £0.44m (£0.44m).

A directors' say rental and capital values of the Manders Centre have improved since the valuation on December 31, 1977. SSAP 15 has been applied and the 1977 tax charge restated. Attributable profit comes through at £2.32m, against £1.71m.

# Dispute-hit York Trailer slumps to £1.15m, but pays maximum

INDUSTRIAL DISPUTES inside and outside the group hit the profits of York Trailer Holdings. The taxable surplus for 1978 slumped from a record £2.74m to £1.15m on a turnover down from £36.2m to £32.2m. But the maximum permitted dividend is being paid.

The directors say the biggest single cause of the earnings drop was the go-slow for nearly all the final quarter at the Anthony Carmichael plant in Co. Durham.

The group was also badly affected by the lorry drivers' strike and two 'disastrous' months in November and December led to a final quarter loss.

Exports dropped from £14m to £8.5m, almost entirely due to a loss of markets in Turkey, Nigeria and Iran.

The board adds that the haulage strike wrecked January business and profits and its aftermath was felt into February.

Although the company expects to profit in 1979, the directors say it is doubtful that the group will break even in the first quarter. However, despite the bad start they say that the year's earnings should exceed those of 1978.

On the brighter side there is an improvement in exports to Europe, and the group is looking for a rapid build-up of profits from its new Illinois I/O operation which started production on March 1. The board says it is looking for further opportunities for expansion through acquisition in the U.S.

Europe, and the group is expected from the UK's profitable service organisation, aided by additional depots in Birmingham and Leeds.

After tax for the year of £270,000 (£210,400) attributable profits are down from £2.53m to £881,417. The 1977 tax has been reduced to take account of SSAP 15.

The final dividend of 1.196p net per 10p share lifts the total from 2.143p to 2.339p.

comment

York Trailer's misfortunes seemed to multiply during the year and following a number of bearish statements from the company the final outcome is a 58 per cent drop in taxable profits. The market had been well prepared and cheered by some optimistic news that the company even managed a 1p rise to 52p where they stand on a p/e of 6.4 (over 10 fully taxed) and a yield of 7.1 per cent. The question now is really not if but when the group is going to recover and this rating seems sound given the undoubted long term potential. The current year, for instance, should see an improvement but profits are unlikely to approach the 1977 peak. On the other hand if it seems probable, the Government

eventually comes into line with EEC maximum weight specifications, the company should really cash in on demand for new trailers. For the moment, however, the problem is Anthony Carmichael where profits turned around from more than £200,000 in 1977 to a loss of £550,000 last year. Both Carmichael and the trailer side have lost out badly in export markets and it will take time to recoup the damage.

forecast that the full year result would comfortably exceed the previous year's.

Yearly pre-tax earnings per 10p share are shown as 5.35p (4p), and as 3.23p (2.01p) after tax. The net dividend total is stepped up from £0.8375p to £0.7655p, with a maximum permissible final of £0.4635p. A one-for-three scrip issue is also proposed.

Net profits for the year improved from £155,000 to £200,000 after tax of £200,000 (£153,000).

## FEB Int. advances to £0.53m

RECORD PROFITS are announced by FEB International, the chemical and fixing device group. The taxable surplus for 1978 was up £206,000 to £327,000 on turnover ahead from £9.7m to £10.36m.

At the halfway stage when the group advanced from £133,000 to £204,000 the directors reported a steady increase in trading in the latter months.

Tax for the year takes £308,000, against £174,000, leaving net profit up from £147,000 to £224,000. The surplus on the disposal of three buildings' merchants added £121,000 to after tax profits last year.

The final net dividend of 1.21p per 10p share lifts the total from 1.76p to 1.97p. Stated earnings are up from 3.22p to 4.91p.

The chairman and his wife have waived the final dividend on 500,000 shares and, allowing for this, the cost of the final is £48,118 (£44,653).

A valuation of the group's properties at December 31, 1978, has shown a £508,000 excess over book value, which has been credited to capital surplus.

## First-half increase by Beckman

FOLLOWING a downturn from £1.71m to £1.53m in the previous full year, taxable profits of A. Beckman, converter and merchant of fabrics, increased from £0.87m to £1.08m for the six months to December 31, 1978, on turnover of £5.63m against £5.01m.

Mr. S. Beckman, the chairman, says the company has maintained its momentum into the second half and he looks forward with some confidence to a continuation of this trend.

From stated half-yearly earnings of 4.98p (4.07p) per 10p share, the net interim dividend is lifted from 1.77p to 1.85p and the maximum permitted total is forecast—last year's payments totalled 4.89p.

Tax took £550,140 (£459,930) giving net profits up from £414,626 to £508,001. The interim dividend absorbs £198,640 (£190,804).

## Progress for FC Finance

ALTHOUGH second-half profits did not reach the level of the first six months, P. C. Finance finished 1978 with pre-tax surplus well ahead from £1.13m to £1.83m, on turnover of £56.58m against £62.8m.

First-half profits jumped from £408,000 to £940,000, but the directors warned that it was unlikely that this profit level would be maintained in the second six months.

Profits would be affected by increased money costs and the re-introduction of the Bank of England supplementary special deposit scheme, they said.

Stated yearly earnings rose from 8.2p to 11p per 25p share, while a final dividend of 1.1p brings the net total to the maximum permitted 2.2p (2p).

Interest took £4.63m (£4.55m) and tax charge was up from £0.52m to £1.02m.

# Associates' results boost Schroders

BANKING AND insurance profits of Schroders were lower in 1978. However, some growth by the parent company and a sharp recovery in the share of associates results enabled the group to finish the year with a £1.44m jump in net total disclosed profit to £4.94m.

After minority interests and transfers to inner reserves the banking and insurance subsidiaries profit came out at £3.85m against £4.4m, while Schroders Limited and the non-banking companies lifted their contribution, after minorities, by £218,000 to £271,000.

The biggest gain came from the upturn in the share of associates from £588,000 loss to £592,000 surplus and a £874,000 share of those companies' extraordinary surplus on the sale of investment

properties in the UK and France. The associated companies' recovery reflects a significant reduction in the loss at the 50 per cent-held Bermuda-based Property Holdings International which, as already announced, is being dissolved.

The disclosed group profit is shown after interest on loans after tax and minorities, up from £763,000 to £1.14m. A net final dividend of 9.7746p per 21 share lifts the total to 12.7746p (11.5679p) including an additional 0.1275p paid with the 1978 interim.

At year end the group's liquid assets were up from £432m to £655m and loans and advances amounted to £574m (£508m). Deposits, other accounts and inner reserves were higher at £1.25m, against £944m. See Lex

## ARTHUR BELL & SONS LIMITED



### SCOTCH WHISKY DISTILLERS, PERTH

#### INTERIM FINANCIAL STATEMENT (UNAUDITED) FOR THE HALF-YEAR ENDED 31ST DECEMBER, 1978

	Half-year ended 31st December, 1978	Half-year ended 31st December, 1977
Group Turnover—excluding inter-company sales ...	103,919	86,229
Scotch Whisky Division .....	94,977	78,403
Glass Container Division .....	8,748	7,748
Transport Division .....	196	78
	103,919	86,229
Group Trading Profit .....	10,286	9,273
Less: Depreciation—See Note 1 ...	673	491
	9,613	8,782
Add: Investment Income .....	3	4
	9,616	8,786
Less: Interest on loans .....	942	1,013
Group Profit before Taxation .....	8,674	7,773
Scotch Whisky Division .....	7,812	6,971
Glass Container Division .....	860	832
Transport Division .....	2	(30)
	8,674	7,773
Taxation .....	2,516	2,171
Group Profit after Taxation .....	6,158	5,602
Earnings per share—See Note 2 ...	13.33p	12.09p

The Directors have declared an Interim Dividend for the year to 30th June, 1979, on the Ordinary Share Capital enlarged by the recent Scrip Issue of 1,767,850 per Ordinary Share (£1,007,140) absorbing £21,624 (£746,938). The Interim Dividend will be paid on 4th June, 1979, to Ordinary Shareholders on the Register at the close of business on 10th May, 1979. A Preference Dividend amounting to £7,700 (£7,700) was paid in the six months period to 31st December, 1978.

Note 1  
No depreciation has been provided on Freehold Heritable Properties because the Board considers that such Properties currently have a value in excess of that in the Balance Sheet.

Note 2  
The calculation of Earnings per share for the Half-year ended 31st December, 1977 has been adjusted to reflect the recent Scrip Issue.

## Bentima increases to £165,000

Pre-tax profits of Bentima Industries, watch and clock importer and precision instrument and components manufacturer, increased from £150,000 to £165,000 in the six months to December 31, 1978. Group sales revenue rose from £3.02m to £3.56m.

The directors anticipate profits for the first six months of 1979 will be ahead of the same period last year.

They add that trading in the period under review was generally in line with expectations. Further substantial orders have been received in the engineering companies.

Davall, a subsidiary, has agreed with the Department of Industry to develop certain innovative printed circuit boards with support of Government funding under the electronic components scheme.

Tax for the period takes £38,000 (£30,000). Figures include Standard Industrial Holdings from July 1, 1978.

It was announced in September that the next accounts would be made up to the 18-month period to June 30, 1979, to bring the year-end of the company and its principal subsidiaries into line. In the 1977 year, taxable profits were £266,000.

## Drake & Scull chief confident

Shareholders of engineering group Drake and Scull Holdings were told by the chairman Mr. Michael Abbott at yesterday's annual meeting that higher profits and dividends are in prospect for the current year.

Mr. Abbott said: "Current trading, both in respect of

volume and profitability, is at a most satisfactory level, and prospects for the year in total are encouraging. In overall terms, backed by good cash resources, your board views the future with confidence, and is planning for the achievement of higher profits and dividends in

the current financial year."

He indicated yesterday that the board wishes to conclude its agreement with the Department of Environment by not later than April 30, 1979.

Mr. Abbott added: "This step will ensure that, together with the termination of its contingent liability, the Department should, through a placement of its 'E' preference shares, obtain approximately a 70 per cent profit on its investment in our company."

All institutional shareholders of 'E' preference shares are planning to convert into ordinary on the next conversion date, which is next Tuesday.

Subject to the Department of the Environment's agreement to effect a similar conversion with its holding of 'E' preference shares, an early capital reconstruction programme will then take place which Mr. Abbott said: "We believe will be in the best interest of all shareholders."

An announcement is expected shortly and any reconstruction will be followed by an EGM to obtain shareholders' approval. The group is also considering two variations, and after the meeting Mr. Abbott indicated that the reconstruction might be followed by a rights issue, depending on market conditions.

## DIVIDENDS ANNOUNCED

	Current payment	Date	Corr. of	Total	Total
			of	year	last
			year		year
Banners .....	1.27	June 5	0.55	2.22	1.02
Barclay & Sons .....	1.87	May 21	1.72	3.07	2.75
A. Beckman .....	1.95	May 11	2.18	4.08	3.64
R. Cartwright .....	2.56	May 11	2.18	4.08	3.64
Feb Int .....	1.21	May 17	1.1	1.95	1.76
F.C. Finance .....	1.1	—	1	2.2	2
Hanger Invs. .....	0.5	—	0.46	0.5	0.46
Legal and General .....	4.253	—	3.66	6.51	5.72
Manders .....	2.41	May 4	1.72	3.31	2.54
Prudential Corp. .....	5.26	May 24	4.2	8	6.71
Rotork .....	0.56	May 25	0.6	1.31	1.18
Royal Worcester .....	4.73	May 11	4.21	7.13	6.38
A.C. Stanley .....	2.9	—	2.22	4.9	3.92
Thurston Barz .....	0.46	May 2	0.48	0.76	0.76
Samuel Progs. .....	1.1	July 2	—	2.35	2.35
Schroders .....	9.77	May 11	8.44	12.77	11.57
Sharna Ware .....	1.66	—	1.41	2.66	2.4
Slough Estates .....	1.53	—	1.52	2.53	2.27
Stag Furniture .....	4.2	May 31	2.8	6.5	4.8
York Trailer .....	1.2	July 2	1.07	2.39	2.14

Dividends shown pence per share net except where otherwise stated.  
\* Equivalent after allowing for scrip issue. † On capital increased by rights and/or acquisition issues. ‡ Includes 0.00881p for tax change. § Includes additional 0.053p for 1977.

## To the holders of The Burmah Oil Company, Limited 5 1/2% Dollar Bonds Due 1988

Convertible into registered Ordinary Shares of The "Shell" Transport and Trading Company, Limited

NOTICE IS HEREBY GIVEN pursuant to the conditions of the said Bonds and Section 4.06 of the Indenture dated as of 1st October 1968 between The Burmah Oil Company, Limited, and Morgan Guaranty Trust Company of New York that The "Shell" Transport and Trading Company, Limited ("The Shell"), has announced its intention, subject to the approval of an Extraordinary General Meeting of the members of "The Shell" to be held on 17th May 1979, to make a 1-for-1 capitalization issue of Ordinary Shares to its Ordinary Shareholders. The proposed record date for the aforementioned issue is to be 12th April 1979.

A notice pursuant to the conditions of the said Bonds and Section 4.07 of the aforementioned Indenture, setting forth any adjustment to the Conversion Rate (as defined) arising from the "Shell" capitalization issue, will be issued by The Burmah Oil Company, Limited, following the implementation by "The Shell" of its proposals. Such adjustment will be applied retrospectively in accordance with the terms of the Indenture.

The Burmah Oil Company, Limited.  
Registered Office:  
48, St. Vincent Street, Glasgow.  
22nd March 1979.

## CEMENT-ROADSTONE HOLDINGS LIMITED

### RIGHTS ISSUE OF ORDINARY SHARES

Owing to the current postal problems in London and the South East of England and in Ireland, shareholders in the United Kingdom may not be able to ensure that Provisional Allotment Letters and cheques sent through the post are received by Bank of Ireland by 3.00 p.m. on 30th March, 1979.

Ordinary shareholders who wish to subscribe for the new shares to which they are entitled and who are in any doubt that their documents will be received by Bank of Ireland by that time should make arrangements with their own bank manager or stockbroker to telephone Bank of Ireland and to arrange for payment to be made direct to Bank of Ireland, City Office, Woolgate House, 25 Coleman Street, London EC2R 5BT, of the amount payable on acceptance not later than 3.00 p.m. on 30th March, 1979. They should also forward the provisional



Companies  
and Markets

## UK COMPANY NEWS

Record £2.3m  
for Hanger

AXABLE PROFITS of Hanger Investments, vehicle leasing specialist and Ford main dealer, eased 90 per cent from £2.3m to a record £2.4m in 1978. This was despite the directors warning at halfway that an exceptional growth in profitability over the past few years could not be maintained in the second half.

However, at the interim stage, net profits were up from £53m to £124m, they expected 1979 profits to be in excess of £177.

The directors now say the suits were achieved notwithstanding a long industrial dispute at Ford in the latter part of the year.

Turnover for the year rose to £24.54m to £28.84m. After a net profit came through £2.14m (£0.83m). Again, no provision was made for tax in respect of capital gains.

Stated earnings before tax are 63p (13.56p) per 10p share. A net dividend is lifted from 55.99p to a maximum permitted 0.0681p for 1977 arising from the reduction in tax rate. The directors explain that the 10 months' contribution from Interleasing Truck Rental, acquired during the year, pre-tax profit was struck after a net of £4.4m (£2.44m) against profit was £2.1m against £8m.

## comment

nger is one of many companies which has cashed in on the surmountable demand for all forms of equipment leasing: new dress booked last year used by 80 per cent while cars chased for lease totalled 3m, against 5.7m in 1977. The director does not itemise its

activities but in view of the group's own emphasis on future growth in this area, any action the Chancellor takes in the budget is potentially worrying. Profits, meanwhile, reflect the current boom with a 90 per cent rise at the pre-tax level. Second half growth, thanks to the impact of the Ford strike, was admittedly a bit lower and the figures include a net first time contribution (again not disclosed) of perhaps £400,000 from Interleasing Truck Rental. Nevertheless the current period is obviously going well and although total UK registrations are likely to be down in 1979 Ford sales should hold steady if it continues to increase its market share. At 53p the shares are on a fully taxed p/e of 4.3 where the yield is a lowly 1.4 per cent.

Cartwright  
expands  
to £0.93m

ON TURNOVER of £5.95m compared with £4.94m in 1977, Cartwright (Holdings), maker of door and window furniture, boosted taxable profits from £569,383 to £931,285 for 1978, with £392,000 against £296,600 arising in the first six months.

Net earnings per 10p share are given higher at 11.01p (8.85p) and the net dividend total is effectively lifted from 3.6364p to the maximum permitted 4.06061p, with a final of 2.56081p. Tax took £485,146 (£347,710) leaving net profits up from £321,873 to £446,139. The dividend absorbs £164,825 (£147,336).

## Sanderson Murray loss

TURNROUND from £68,000 able profit to a £4,000 loss the half-year to December 31, 8 is reported by the wool man-made fibres group Sanderson Murray and Elders (Holdings). And the directors set an overall loss for the year against pre-tax profits last year of £149,000.

The Board says the difficult trading conditions reported in the year have continued and have been aggravated by the transport crisis. As a result the rate of has increased since the directors added that a wool rise in February improved but it remains to be seen whether the improvement will be sustained. However it appears have been too late to

materially reduce an expected overall loss for the year.

Sales for the half-year were down from £23.1m to £22m. The trading loss came out at £27,000, compared with £47,000 profit, but was reduced by investment income of £23,000 (£21,000).

However, the loss is increased to £12,000 (profit £80,500) at the attributable level after a tax charge of £7,500 and minorities of £500.

The directors say that in view of the group's resources a dividend will be paid for the current year. Last year the net payout was 3.465p. Stated earnings per 50p share are down from 3.3p to a 0.6p deficit.

Further substantial  
growth for Bambers

TAXABLE PROFITS of Bambers Stores leapt by more than 100 per cent for the second successive year.

In the year ending January 27, 1979, pre-tax profits jumped by 122 per cent from £1.25m to £2.79m, on turnover, excluding VAT, of £11.16m, compared with £10.88m. A big increase was forecast at the halfway stage when profits were up from £203,500 to £339,000.

The directors add that current year sales are well ahead of those for the corresponding period last year. They say that the expansion of selling space is continuing. Eleven new stores have been opened during the past eight weeks and many of these are larger than before.

At the end of the financial year the group had 136 shops, compared with 105 at the end of 1978.

The final dividend of 1.2666p net per 10p share lifts the total from an adjusted 1.0224p to 2.31785p. A one-for-one scrip is also proposed. Adjusted earnings per share are shown well up at 19.29p, against 8.89p.

Tax for the year takes £497,000, against £202,000, leaving net profit up at £2.29m, compared with £1.06m. After dividends costing £363,000 (£121,000) retained profits are up from £935,000 to £2.03m.

## comment

The key to Bambers' 1978 performance and its spectacular growth over the last five years, is its success in taking its growing range of low-priced women's and girls' dresses and coats to its potential customers in the provinces and the suburbs. Some 31 new stores were opened in 1978 and these con-

tributed roughly half the revenue increase. The other important factor is the group's control of its selling margin by importing textiles, mainly from the Far East, and having garments made to its own designs at a fixed price by outworkers on contract. Paralleling the sales and profit growth has been a big jump in market capitalisation and the 13 fold increase (if the latest one for one issue is included) in the number of ordinary shares since 1974. With 11 stores opened so far this year and around 30 more openings expected, revenue and profit growth is again likely to be well above retailing sector averages. The shares, at 210, are on a p/e of 10.8 and a yield of 1.6 per cent.

Sharna  
ahead  
to £0.7m

AFTER further progress in the second half, Sharna Ware lifted pre-tax profits in 1978 from £700,578 to £814,980 on turnover ahead from £12.98m to £13.93m. At the halfway stage, when the group was optimistic about prospects, it reported taxable profits of £109,278, against £34,567.

Tax for the period takes £322,926 (£370,910), after which is shown earnings per 30p share are stated well ahead from 16.85p to 26.94p. The final dividend of 1.6533p net lifts the total from 2.3558p to 3.6533p.

The two joint managing directors of the group, which

makes plastic ware, have again waived the final dividend on shares they hold beneficially.

Woolworth  
looking for  
profits rise

F. W. Woolworth and Company is budgeting for a further profits increase in the current year. Last year it made record pre-tax profits of £53.1m.

In his annual statement Mr. Stephen Owen, chairman, says the budget for 1979 indicates a further increase in profit at the year end.

The group plans to spend £24.6m in 1979 on modernising, extending and relocating stores and on a new store in Milton Keynes. This compares with £16.4m expenditure last year.

The group's freehold and leasehold properties were professionally valued at £477.6m, an increase of £265.8m over book value. The valuation raises the group's net worth to £549m.

The severe pressure on price margins for the High Street food business has confirmed the decision to reduce dependence on this area of retailing, says Mr. Owen.

The elimination of food from small and medium-sized stores has continued.

Sales space released in this way has been used to improve the ranges in the clothing, DIY, records and other growth areas, adds the chairman.

On a current cost basis last year's profits are shown at £37.01m.

A. G. Stanley makes 74% profit  
leap to best-ever £1.93m

WITH SALES 34 per cent higher at £21.65m, taxable profits of A. G. Stanley Holdings, retailers of home-decorating materials, jumped 73 per cent from £1,109,568 to a record £1,933,453 for the year ended December 30, 1978.

Increased sales, with efficiency throughout the company enabled it to improve net profit margins in England from 7.3 per cent to 9.4 per cent.

Mr. Malcolm Stanley, the chairman, says the results reflect the benefits of careful forward planning during 1978-79, which was designed to enable the company to take rapid advantage of any surge in consumer spending. Trade in the first six weeks of this year was disappointing due to the severe weather and the lorry drivers' strike which interrupted supplies of seasonal goods.

However, the directors are confident that any loss will be recouped before the end of 1978, and they anticipate another record year.

The total net dividend is effectively raised 25 per cent from 3.91946p to 4.89p per 50p share, with a 2.5p final. A two-for-one scrip issue is also proposed, which will give the company trustee status.

The 1978 results exclude the 97 retail shops acquired from Berger Jensen and Nicholson, but these will make a contribution during the current year. However, because these stores are mainly smaller than those normally operated by the group,

the chairman explains that it would be wrong to expect that by nearly doubling the number of retail outlets, group sales will increase by the same proportion.

At half-time, pre-tax profits were ahead at £746,074, after providing for losses of £45,133 in Holland, compared with £503,518 after expenses of £27,389, before opening the Dutch stores.

1978 1977  
Turnover ..... 21,652,516 16,148,118  
Trading profit ..... 1,801,184 1,076,525  
Other income ..... 132,319 33,241  
Pre-tax profit ..... 1,933,453 1,109,568  
Tax ..... 669,000 31,520  
Net profit ..... 1,274,453 1,078,048  
Goodwill written off ..... 258,398 155,476  
Dividend ..... 1,016,055 922,572  
Retained ..... 258,398 155,476  
† After waivers.

## comment

Stanley has turned in full-year profits at the top end of market expectations, and the shares rose 5p to 25p. The 74 per cent profits rise has been achieved on a sales increase of a third, reflecting lower overheads and an underlying volume gain of just under a fifth—a creditable performance given that the overall market for decorative products has shown little growth.

Stanley's explanation is that it continues to increase its market share, particularly on the paints side which accounts for 40 per cent of group sales. Growth in wallcoverings has been slower but most of the 'click' has been taken up by ceramic tiles. This year has started badly because of the lorry driver's strike and it will clearly

take some time to recover. Paint margins will get tighter later in the year as the effects of the anticipated 25 per cent increase in raw material prices work through. However, all this should be more than offset by the first-time contribution from Berger (which should bring in around £300,000) and at least a dozen new outlets currently in the pipeline.

The shares are tightly held at present but Stanley hopes the scrip will increase their marketability. They yield just under 3 per cent—roughly in line with the sector—while the p/e is 15.5.

SAMUEL  
PROPERTIES  
LIMITED  
INTERIM STATEMENT

Results for the six months ended 31st December, 1978

	Unaudited Six months to 31st Dec. 1978	Audited Six months to 31st Dec. 1977	Year to 30th June 1978
Gross income	5,642,801	3,166,015	8,058,454
Operating profit	2,407,365	1,801,889	3,558,702
Interest payable	1,165,615	979,726	1,930,893
Profit after interest	1,241,750	822,163	1,627,809
Share of profits (less losses) of Associated Companies	77,100	(128,000)	(184,462)
Profit before taxation	1,318,850	494,163	1,433,347
Taxation including prior year items	(467,100)	(108,000)	137,824
Profit after taxation	851,750	386,163	1,571,171
Transfer from unrealised capital surplus in respect of development properties	41,583	—	30,861
Profit after transfer from unrealised capital surplus	893,333	386,163	1,602,032
Profit attributable to minority interests	3,186	—	6,816
Profit before extraordinary items	890,147	386,163	1,595,016
Extraordinary items	148,824	—	365,567
Profit after extraordinary items	1,038,971	386,163	1,960,583
Transfer to capital surplus in respect of non-distributable profits	328,234	164,307	706,731
Profit available for dividend	710,737	221,856	1,253,852
Dividends	278,269	—	624,896
Increase in retained profits	432,468	221,856	628,956

Estimated  
Arises substantially in associated companies  
After waivers

Directors have declared an interim dividend of 1p per share which together with the related tax credit is equivalent to 1.4925p per share. A interim dividend will be paid on the 2nd July, 1979 to those Shareholders whose names appear on the Register of Members at the close of business on the 6th June, 1979. No interim dividend was paid last year.

SAMUEL PROPERTIES LIMITED  
The Colonnades  
82 Bishop's Bridge Road  
Bayswater  
London W2 6BD

Gross income jump lifts  
Samuel Props. to £1.32m

WITH a £2.47m jump in gross income backed by a turnaround in its share of associated companies' results, Samuel Properties lifted taxable profits from £393,183 in the six months to December 31, 1978.

Gross income of this property investment company expanded from £3.17m to £5.64m. Associated companies turned in a £77,100 surplus compared with a £128,000 loss last year.

1978 1977  
Gross income ..... 5,642,801 3,166,015  
Operating profit ..... 2,407,365 1,801,889  
Interest payable ..... 1,165,615 979,726  
Profit before tax ..... 1,318,850 494,163  
Tax ..... 467,100 108,000  
Net profit ..... 851,750 386,163  
From capital ..... 41,583 —  
To minority interests ..... 3,186 —  
Extraordinary credit ..... 148,824 —  
To capital surplus ..... 328,234 164,307  
Available ..... 710,737 221,856  
Dividends ..... 278,269 —  
Retained ..... 432,468 221,856  
† In respect of development properties  
† Arises substantially in associated companies  
† In respect of non-distributable profits

There is an interim dividend this time of 1p net—last year's

FS Assurance raises  
reversionary rates

A substantial increase in reversionary bonus rates has been announced by the Glasgow-based life company FS Assurance in respect of the three years ending December 31, 1978. On all with-profit contracts, both assurances and annuities, with the exception of group controlled funding schemes, the rate is £4 per cent per annum of the basic benefit plus 25.50 per cent per annum of the existing declared bonuses.

This is a change in the bonus system compared with the previous full declaration for the triennium ended 1975. Then the bonus rate was 24 per cent of both the basic benefit and the attaching bonuses. The company made the changeover from January 1977, paying a higher rate of

single payment was 2,345p on taxable profits of £1.33m. Tax, including prior year items, takes £487,100 (£108,000).

£152,136  
for Emray  
at year-end

Profit of Emray, motor vehicle distributor, was £152,136 in 1978, on turnover of £3.95m.

Mr. David Eldridge, chairman, explains that no meaningful comparison of activities can be ascertained from the 1977 figures, when profit was £135,601 on turnover of £1.91m, in view of the complete change of the group structure.

The basic change is the establishment of a sound UK trading base and the sale of the Zambian interests as from January 1, 1978. Remittances due from Zambia are still subject to exchange controls. Earnings per 5p share are given as 1.1p.

The rate for group controlled funding schemes is £1.75 per cent per annum calculated on all contingent pensions purchased.

The terminal bonus rate, payable on claims arising on all with-profit contracts, except group controlled funding, is maintained at 20 per cent of the reversionary bonuses attaching at the time of claim. This rate has remained unchanged for the past six years.

## Prudential Corporation Limited

The unaudited results for the Prudential Corporation for 1978 are set out below with comparative figures for earlier years for the Prudential Group of Companies.

The Directors have declared a final dividend of 5.263p per share payable on 24 May next. This, together with the interim dividend of 2.737p per share paid in November last by Prudential Assurance amounts to 8.000p per share.

	1978 £m	1977 £m	1976 £m	1975 £m
Life:				
Premium income	761.3	882.4	612.9	484.7
Surplus attributable to policyholders	248.5	220.5	198.4	174.8
Surplus attributable to shareholders	17.2	15.9	13.6	12.0
General:				
Premium income	384.4	358.4	321.9	233.9
Gross underwriting result	[4.2]	[9.5]	[10.3]	[8.3]
Investment income	27.2	23.4	21.5	15.7
Taxation	23.0	13.9	11.2	7.4
Net Surplus	8.8	3.5	4.9	4.1
Profit and Loss Account:				
Life	17.2	15.9	13.6	12.0
General	16.2	10.4	8.3	3.3
Other net income	7.8	5.6	4.5	2.7
Profit for the year	41.2	31.9	24.4	18.0
Retained profits	17.1	12.1	8.0	3.2
Dividend cost	24.1	19.8	16.4	14.8
Dividend per share	8.083p	6.648p	6.010p	5.412p
Earnings per share	13.8p	10.7p	9.0p	6.6p

\*Including the further dividend of 0.063p paid with the interim dividend in November last following the change in the imputed rate of tax credit.

There was continued improvement in the overall surplus from Life business which enabled policyholders' bonuses to be increased and, despite a non-recurring loss of £2.4m in Vanbrugh Life, there was a larger surplus attributable to shareholders.

The net surplus from General business reflects an increase of £8.1m in the Mercantile and General and a reduction of £9.5m in Prudential Assurance.

The underwriting result of Prudential Assurance showed little overall change from 1977. Results in the United Kingdom deteriorated by £2m due to increased losses on the motor and liability accounts. Although the domestic account showed improvement there was a loss of £4.5m reflecting a combination of under-insurance and adverse weather. An underwriting profit of £2m arose overseas largely in Canada. Trading conditions in Australia and South Africa remained very difficult. There was some deterioration in the underwriting result for L'Escaut, our subsidiary company in Belgium, but investment income improved and the trading profit showed little change. Business in Holland showed a large increase and was profitable.

Underwriting results for Mercantile and General showed improvement for both proportional and non-proportional fire and accident business and for marine and aviation business. Trading profits were improved also by higher investment income.

The growth of income and profits in 1978 would have been even greater but for the strengthening in the sterling exchange rate.

The total free assets of the insurance subsidiaries at the end of 1978 represented 54% of their general insurance premium income.



Prudential Corporation Limited, 142 Holborn Bars, London EC1N 2NH.

## 1978 RESULTS

Unaudited group results for 1978 of Legal & General Assurance Society Limited.

	1978 £m	1977 £m
Group Premium Income		
Pensions and life business	477.6	403.8
General insurance	131.0	123.2
Profit & Loss Account		
Long term profits after tax	9.3	8.2
Underwriting loss on general insurance	(6.0)*	(3.9)*
Investment and other income	20.3	15.9
Associated companies' profits	0.0	0.3
Expenses	23.6	20.5
Group Operating Profit before tax	20.8	17.4
Tax	5.7	3.0
Minorities	0.2	0.2
Group Operating Profit attributable to shareholders	14.9	14.2
Shareholders' dividends	9.6	8.3
Retained profits	5.3†	5.9
Earnings per share (based on group operating profit)	10.27p	9.85p
Shareholders' Dividends	6.510p	5.767p

\*After £2.0m (1977 £1.1m) release from provision for unearned premiums.

† Before charging an extraordinary prior year tax adjustment of £0.8m (1977 Nil).

Legal & General  
We cover the things you care for

A final dividend for 1978 of 4.247p per share which includes an additional 0.053p for 1977 is recommended payable on 1 June 1979. With the interim dividend of 2.263p, and associated tax credits totalling 3.207p, this makes a total gross dividend of 9.717p per share. The Report & Accounts for 1978 will be sent to shareholders on 23 April 1979.

Annual General Meeting - 16 May 1979.



## Stag's 68% profit rise: steps up dividend by 35%

## BOARD MEETINGS

dates of Board meetings to the Stock Exchange. Such meetings are usually held for the purpose of considering

[illegible]

Wolstenholme Rink. Twothirds United Collieries April

bility for payment can be fore-  
seen and the comparative figures  
for 1977 have been restated.

Bank balances and cash total  
£333,000. Reserves have increased  
to £5.63m, compared with £1.63m  
at December 31, 1977, reflecting

the change of accounting for de-  
ferred tax, a surplus on property  
revaluation. The surplus arising  
on acquisition of Merewade and  
the retained profit. Full details  
will be shown in the annual  
accounts.

The final dividend of 0.66p net lifts the total from an equivalent 1.18p to 1.31p. Stated earnings per 10p share are down from 10.2p to 9.7p.

The directors say that the 18 per cent increase in sales and the 4 per cent rise in trading profits reflected the continuing pressure on margins.

They expect the marine side to trade profitably in the current year, but throughout the group trading conditions are highly competitive.

The group has continued to increase investment in research and development to hold its technical position in its markets. New products are being introduced in the current year. These include a range of pneumatic actuators in the U.S.

## Barton and Sons 9% higher

**SECOND-HALF** pre-tax profits of Barton and Sons, tube manufacturer and engineer, dropped from £2.34m to £2.01m, but the total for 1978 was 9 per cent higher at £2.95m, compared with £2.65m. The company also covered up 6 per cent to £4.63m.

Since the half-year end, the group has sold its South African company, which has accounted for some £408,000 in loss of profit. In addition, the US sales division still has a substantial operation in Canada.

Trading profits for the year rose from £2.98m to £4.18m, although only the engineering division, up from £1.49m to £1.84m, was profitable.

Profits from tubing and fabrication were lower at £1.55m

**QUINTON** Hazell Automotive has won the Automobile Association's national motoring award gold medal for 1978 for its Underider safety device designed to reduce the severity of impact should a vehicle run into, and help the level of the rear platform of heavy lorries.

The awards, which provide for the presentation of gold and up to three silver medals for significant contributions to motoring, were presented by Lord Erroll of Hale, chairman of the AA, in London this week.

Copies of the Interim Report are available from the Company  
at the above address.



# INTERNATIONAL COMPANIES and FINANCE

## NORTH AMERICAN NEWS

### Bank of Montreal calls off Bankers Trust deal

BY OUR FINANCIAL STAFF

ANKERS TRUST, the eighth largest U.S. bank, and Bank of Montreal, have failed to reach agreement on the sale of 89 Bankers Trust branches in New York to the Canadian concern. The deal, which would have involved the transfer to Bank of Montreal of some \$1bn of retail banking assets and would have given the Canadian bank significant foothold in the New York retail banking market, ended on the question of Bankers Trust's credit card business.

Bankers Trust said that the ending of negotiations is a result of inability to agree on a basis of sale for the credit card operation, and on the terms of providing continuing operating and other services by Bankers Trust to Bank of Montreal during the transition period. The original announcement of a sale in November said that

talks over the credit card business of Bankers Trust, which has some \$400m of assets, were at a preliminary stage. Mr. William Mulholland, the Bank of Montreal president and chief executive, told a news conference on Tuesday that the bank was insisting that the credit card business should be part of the transaction, but that Bankers Trust was arguing that it had the right to sell that business separately.

Mr. Mulholland said that a credit card operation was essential to the Canadian bank's successful entry into the New York retail banking market. Bankers Trust said yesterday that it is considering other sale options that are consistent with its corporate strategy, which places increased emphasis on the bank's strengths in the wholesale commercial banking, trust and money market business.

The news follows an announcement on Tuesday evening that Bank of Montreal had reached agreement to buy 25.1 per cent of Allgemeine Deutsche Credit Anstalt of Frankfurt for an initial \$389m (US\$333m). A clause linking the purchase price to future earnings of the West German bank may take the cost of the deal to \$344m. Bank of Montreal has a seven-year option to buy a further 25 per cent of ADCA at a price of \$344m for the first two years, plus interest of 6.5 per cent thereafter.

News of the deal was greeted with surprise in Frankfurt banking circles. ADCA's performance in recent years has hardly been sparkling, and Wells Fargo International Investment Corporation of San Francisco, which formerly held more than 25 per cent of ADCA's equity, has substantially reduced its holding in the bank.

### Judge rules on letters of credit

By Stewart Fleming in New York

A NEW YORK State supreme court judge has ruled that two of the world's leading international banks cannot be prevented from meeting their commitments under letters of credit to the Iranian government, even though the agreements were entered into before the collapse of the Shah's regime.

Although the decision was appealed by AT and T on a point of law to the New York State supreme court, appellate division legal experts suggested that the judge's opinion was so sweeping that the Court is unlikely to overturn it.

There have been fears that if the attempt to prevent banks from meeting any payments succeeded, the letter of credit as a financial instrument would be seriously devalued. Currently U.S. banks have an estimated \$24bn of such commitments outstanding.

The letters of credit cover downpayments made by Iran to the U.S. companies, with the understanding that Iran could demand repayment at any time. The cases which Judge Michael J. Donohue decided were brought by American Telephone and Telegraph and a subsidiary against Manufacturers Hanover Trust, and by GTE International and GTE Iran against Manufacturers Hanover and Credit Lyonnais.

Arguing that its contract with Iran has been breached since the revolution, and that it is owed substantial sums under cancellation provisions, AT and T sought to block payments to Iran under the letter of credit. In his decision that the conditions of the letter of credit still apply in spite of the change of government in Iran, Judge Donohue says that the present Government of Iran has succeeded to the position, rights and obligations of the former Government.

He argues that the application of a letter of credit is separate from the underlying business transaction, suggesting that AT and T has the opportunity to go to the courts for relief on its complaint. The Iranian Government has not made claims on the letters of credit.

## EUROBONDS

### Firm improvement in dollar sector

BY FRANCIS GHILES

PRICES OF seasoned dollar bonds, underpinned by a steady U.S. dollar, improved by about 1/2 of a point across the board yesterday in mostly professional dealing.

The \$25m convertible for Esselte has been priced at par with indicated terms otherwise unchanged. The lead managers, Hambros and Svenska Enskilda Banken, fixed a conversion premium of 5.6 per cent. Bearing 7.75 per cent annually, the bonds are convertible starting September 15 into class B shares of the company at a conversion price of SKr 139 per share of SKr 50 nominal amount. The shares were quoted at SKr 150 1/2 on Tuesday.

The Esselte convertible was quoted at 97 1/2 bid yesterday during its first day of trading by the lead managers—one point below the selling group discount. The effective conversion premium has thus been reduced to just below 3 per cent.

The lack of enthusiasm showed by a number of institutional investors for this convertible is attributable to two factors. Though the Esselte stock price track record is a good one, lack of knowledge about the Swedish stock exchange remains considerable. Another problem is that this convertible is the first for a Swedish company that offers no currency option for the payment of interest and principal.

The \$35m FRN for Texas International Airlines was priced at par with indicated conditions otherwise unchanged by the lead manager, Kidder Peabody.

In the sterling sector, prices of seasoned issues moved up during the morning but profit-taking pushed them down in the afternoon. However, on the day, they were about 1/2 of a point higher.

In the Swiss franc sector of the market, prices of seasoned public issues were unchanged for the third day running. The recent SwFr 250m for Australia was quoted at 98 1/2.

Union Bank of Switzerland has arranged a SwFr 50m convertible in the form of a private placement for Okumura. This issue, which carries a coupon of 3 1/2 per cent, has been priced at par.

The three big Swiss banks appear to have decided at their meeting last Thursday that they would limit themselves to issuing a maximum of two Japanese convertibles each between now and Easter. They would then freeze new issues for two weeks.

Many Swiss bankers doubt whether the Japanese will be able to arrange the \$1.2bn worth of convertibles in the Swiss franc sector which the Ministry of Finance in Tokyo has allowed them during the second quarter of this year.

The LuxFr 500m ten-year 6 1/2 per cent issue for the City of Oslo was priced at 99 1/2 to yield 8.07 per cent by the lead manager, Kreditbank Luxembourg. Sweden is to float a \$150m Yankee bond in New York through Salomon Brothers. The maturity of this issue will be seven years with yields on outstanding comparable issues currently suggesting a coupon of around 9 1/2 per cent.

convertibles each between now and Easter. They would then freeze new issues for two weeks. Many Swiss bankers doubt whether the Japanese will be able to arrange the \$1.2bn worth of convertibles in the Swiss franc sector which the Ministry of Finance in Tokyo has allowed them during the second quarter of this year.

The LuxFr 500m ten-year 6 1/2 per cent issue for the City of Oslo was priced at 99 1/2 to yield 8.07 per cent by the lead manager, Kreditbank Luxembourg. Sweden is to float a \$150m Yankee bond in New York through Salomon Brothers. The maturity of this issue will be seven years with yields on outstanding comparable issues currently suggesting a coupon of around 9 1/2 per cent.

convertibles each between now and Easter. They would then freeze new issues for two weeks. Many Swiss bankers doubt whether the Japanese will be able to arrange the \$1.2bn worth of convertibles in the Swiss franc sector which the Ministry of Finance in Tokyo has allowed them during the second quarter of this year.

The LuxFr 500m ten-year 6 1/2 per cent issue for the City of Oslo was priced at 99 1/2 to yield 8.07 per cent by the lead manager, Kreditbank Luxembourg. Sweden is to float a \$150m Yankee bond in New York through Salomon Brothers. The maturity of this issue will be seven years with yields on outstanding comparable issues currently suggesting a coupon of around 9 1/2 per cent.

convertibles each between now and Easter. They would then freeze new issues for two weeks. Many Swiss bankers doubt whether the Japanese will be able to arrange the \$1.2bn worth of convertibles in the Swiss franc sector which the Ministry of Finance in Tokyo has allowed them during the second quarter of this year.

The LuxFr 500m ten-year 6 1/2 per cent issue for the City of Oslo was priced at 99 1/2 to yield 8.07 per cent by the lead manager, Kreditbank Luxembourg. Sweden is to float a \$150m Yankee bond in New York through Salomon Brothers. The maturity of this issue will be seven years with yields on outstanding comparable issues currently suggesting a coupon of around 9 1/2 per cent.

convertibles each between now and Easter. They would then freeze new issues for two weeks. Many Swiss bankers doubt whether the Japanese will be able to arrange the \$1.2bn worth of convertibles in the Swiss franc sector which the Ministry of Finance in Tokyo has allowed them during the second quarter of this year.

The LuxFr 500m ten-year 6 1/2 per cent issue for the City of Oslo was priced at 99 1/2 to yield 8.07 per cent by the lead manager, Kreditbank Luxembourg. Sweden is to float a \$150m Yankee bond in New York through Salomon Brothers. The maturity of this issue will be seven years with yields on outstanding comparable issues currently suggesting a coupon of around 9 1/2 per cent.

## MEDIUM-TERM CREDITS

### Republic Steel raises \$36m

By Our Euromarkets Staff

REPUBLIC STEEL of the U.S. has signed a \$36m revolving credit and medium-term loan in London, for over eight years, obtained from a group of international banks. Union Bank announced.

The facility carries a spread of 1 per cent over interbank rates for the first four years and 3/4 per cent over for the remainder. Banco Nacional de Cuba is arranging a DM 300m seven-year Eurocredit from a group of banks headed by Credit Lyonnais. The spread is 1 per cent for the first three years, and 1 1/2 per cent thereafter.

Costa Rica has signed a \$50m loan agreement with a banking group led by Chase Merchant Banking Group. The 10-year facility carries a spread of 1/2 per cent.

Proceeds will be used to finance harbour developments, with \$26.5m earmarked for the refinancing of two earlier loans to Costa Rican state borrowers. Two Arab consortium banks, the Al-UBAF Group and Arab Latin American Bank, are managing a \$20m 10-year loan to Banco Nacional de Fomento of Ecuador.

Spreads range between 1 and 1 1/2 per cent over interbank rates.

### Socal maintains home output

AN FRANCISCO — Standard Oil California (Socal) said in its annual report that it expects to maintain domestic oil production "at least at current levels" for the next few years and plans to increase domestic natural gas production capacity in 1979.

In its foreign operations, Socal said it plans to participate in drilling exploratory wells in additional areas such as Iran, Iraq and Indonesia and off the coast of Gambia, Ireland, Brazil, and in the East China Sea between Korea and Japan.

Socal said previously reported 1978 net income was reduced by \$4.32 a share by world-wide income taxes, 26 cents a share from complying with Government regulations, and 38 cents a share from environmental expenditures.

Socal earned \$6.48 a share in 1978, up from \$5.89 in 1977.

Socal said it has no specific plans to alter its investment in Amex, which owns 20 per cent of Amex, had made a proposal to acquire the remaining 80 per cent, but was turned down by the Amex directors in September.

The company said the high boost in crude oil prices will undoubtedly lead to further increases in the prices for all petroleum products this year.

The company also said the sales of its domestic oil and gas properties for a total of \$744m are anticipated to be closed during April and May, subject to the completion of definitive contracts and satisfaction of customary closing conditions.

Reuter

The company also said the sales of its domestic oil and gas properties for a total of \$744m are anticipated to be closed during April and May, subject to the completion of definitive contracts and satisfaction of customary closing conditions.

Reuter

The company also said the sales of its domestic oil and gas properties for a total of \$744m are anticipated to be closed during April and May, subject to the completion of definitive contracts and satisfaction of customary closing conditions.

Reuter

### Ashland Oil increases dividend

NEW YORK — Ashland Oil is creating its dividend from 40 cents to 50 cents a share, payable June 15 to shareholders on record at May 31.

The company said its earnings for the first five months of the fiscal year ending September 30 are up about 80 per cent over the corresponding 78 period. Earnings per share

are up over 80 per cent as a result of Ashland's purchases of nearly 10m shares of its common stock earlier in the fiscal year.

The board has authorised the further purchase of up to 5m shares at a maximum price of \$4 1/2 a share. The new purchases will be made on the open market or in block transactions.

Reuter

The company also said the sales of its domestic oil and gas properties for a total of \$744m are anticipated to be closed during April and May, subject to the completion of definitive contracts and satisfaction of customary closing conditions.

Reuter

The company also said the sales of its domestic oil and gas properties for a total of \$744m are anticipated to be closed during April and May, subject to the completion of definitive contracts and satisfaction of customary closing conditions.

Reuter

## FT INTERNATIONAL BOND SERVICE

The list shows the 200 latest international bond issues for which an adequate secondary market exists. For further details of these or other bonds see the complete list of Eurobond prices published the second Monday of each month.

DOLLAR RAISINGS	Issued	Bid	Offer	Change on day week	Yield
Int'l. F. 3 1/2% 7/8	200	94 1/2	94 1/2	+0 1/2	8.78
Int'l. F. 4 1/2% 7/8	200	95 1/2	95 1/2	+0 1/2	8.87
Int'l. F. 5 1/2% 7/8	200	96 1/2	96 1/2	+0 1/2	8.91
Int'l. F. 6 1/2% 7/8	200	97 1/2	97 1/2	+0 1/2	8.95
Int'l. F. 7 1/2% 7/8	200	98 1/2	98 1/2	+0 1/2	8.99
Int'l. F. 8 1/2% 7/8	200	99 1/2	99 1/2	+0 1/2	9.03
Int'l. F. 9 1/2% 7/8	200	100 1/2	100 1/2	+0 1/2	9.07
Int'l. F. 10 1/2% 7/8	200	101 1/2	101 1/2	+0 1/2	9.11
Int'l. F. 11 1/2% 7/8	200	102 1/2	102 1/2	+0 1/2	9.15
Int'l. F. 12 1/2% 7/8	200	103 1/2	103 1/2	+0 1/2	9.19
Int'l. F. 13 1/2% 7/8	200	104 1/2	104 1/2	+0 1/2	9.23
Int'l. F. 14 1/2% 7/8	200	105 1/2	105 1/2	+0 1/2	9.27
Int'l. F. 15 1/2% 7/8	200	106 1/2	106 1/2	+0 1/2	9.31
Int'l. F. 16 1/2% 7/8	200	107 1/2	107 1/2	+0 1/2	9.35
Int'l. F. 17 1/2% 7/8	200	108 1/2	108 1/2	+0 1/2	9.39
Int'l. F. 18 1/2% 7/8	200	109 1/2	109 1/2	+0 1/2	9.43
Int'l. F. 19 1/2% 7/8	200	110 1/2	110 1/2	+0 1/2	9.47
Int'l. F. 20 1/2% 7/8	200	111 1/2	111 1/2	+0 1/2	9.51
Int'l. F. 21 1/2% 7/8	200	112 1/2	112 1/2	+0 1/2	9.55
Int'l. F. 22 1/2% 7/8	200	113 1/2	113 1/2	+0 1/2	9.59
Int'l. F. 23 1/2% 7/8	200	114 1/2	114 1/2	+0 1/2	9.63
Int'l. F. 24 1/2% 7/8	200	115 1/2	115 1/2	+0 1/2	9.67
Int'l. F. 25 1/2% 7/8	200	116 1/2	116 1/2	+0 1/2	9.71
Int'l. F. 26 1/2% 7/8	200	117 1/2	117 1/2	+0 1/2	9.75
Int'l. F. 27 1/2% 7/8	200	118 1/2	118 1/2	+0 1/2	9.79
Int'l. F. 28 1/2% 7/8	200	119 1/2	119 1/2	+0 1/2	9.83
Int'l. F. 29 1/2% 7/8	200	120 1/2	120 1/2	+0 1/2	9.87
Int'l. F. 30 1/2% 7/8	200	121 1/2	121 1/2	+0 1/2	9.91
Int'l. F. 31 1/2% 7/8	200	122 1/2	122 1/2	+0 1/2	9.95
Int'l. F. 32 1/2% 7/8	200	123 1/2	123 1/2	+0 1/2	9.99
Int'l. F. 33 1/2% 7/8	200	124 1/2	124 1/2	+0 1/2	10.03
Int'l. F. 34 1/2% 7/8	200	125 1/2	125 1/2	+0 1/2	10.07
Int'l. F. 35 1/2% 7/8	200	126 1/2	126 1/2	+0 1/2	10.11
Int'l. F. 36 1/2% 7/8	200	127 1/2	127 1/2	+0 1/2	10.15
Int'l. F. 37 1/2% 7/8	200	128 1/2	128 1/2	+0 1/2	10.19
Int'l. F. 38 1/2% 7/8	200	129 1/2	129 1/2	+0 1/2	10.23
Int'l. F. 39 1/2% 7/8	200	130 1/2	130 1/2	+0 1/2	10.27
Int'l. F. 40 1/2% 7/8	200	131 1/2	131 1/2	+0 1/2	10.31
Int'l. F. 41 1/2% 7/8	200	132 1/2	132 1/2	+0 1/2	10.35
Int'l. F. 42 1/2% 7/8	200	133 1/2	133 1/2	+0 1/2	10.39
Int'l. F. 43 1/2% 7/8	200	134 1/2	134 1/2	+0 1/2	10.43
Int'l. F. 44 1/2% 7/8	200	135 1/2	135 1/2	+0 1/2	10.47
Int'l. F. 45 1/2% 7/8	200	136 1/2	136 1/2	+0 1/2	10.51
Int'l. F. 46 1/2% 7/8	200	137 1/2	137 1/2	+0 1/2	10.55
Int'l. F. 47 1/2% 7/8	200	138 1/2	138 1/2	+0 1/2	10.59
Int'l. F. 48 1/2% 7/8	200	139 1/2	139 1/2	+0 1/2	10.63
Int'l. F. 49 1/2% 7/8	200	140 1/2	140 1/2	+0 1/2	10.67
Int'l. F. 50 1/2% 7/8	200	141 1/2	141 1/2	+0 1/2	10.71
Int'l. F. 51 1/2% 7/8	200	142 1/2	142 1/2	+0 1/2	10.75
Int'l. F. 52 1/2% 7/8	200	143 1/2	143 1/2	+0 1/2	10.79
Int'l. F. 53 1/2% 7/8	200	144 1/2	144 1/2	+0 1/2	10.83
Int'l. F. 54 1/2% 7/8	200	145 1/2	145 1/2	+0 1/2	10.87
Int'l. F. 55 1/2% 7/8	200	146 1/2	146 1/2	+0 1/2	10.91
Int'l. F. 56 1/2% 7/8	200	147 1/2	147 1/2	+0 1/2	10.95
Int'l. F. 57 1/2% 7/8	200	148 1/2	148 1/2	+0 1/2	10.99
Int'l. F. 58 1/2% 7/8	200	149 1/2	149 1/2	+0 1/2	11.03
Int'l. F. 59 1/2% 7/8	200	150 1/2	150 1/2	+0 1/2	11.07
Int'l. F. 60 1/2% 7/8	200	151 1/2	151 1/2	+0 1/2	11.11
Int'l. F. 61 1/2% 7/8	200	152 1/2	152 1/2	+0 1/2	11.15
Int'l. F. 62 1/2% 7/8	200	153 1/2	153 1/2	+0 1/2	11.19
Int'l. F. 63 1/2% 7/8	200	154 1/2	154 1/2	+0 1/2	11.23
Int'l. F. 64 1/2% 7/8	200	155 1/2	155 1/2	+0 1/2	11.27
Int'l. F. 65 1/2% 7/8	200	156 1/2	156 1/2	+0 1/2	11.31
Int'l. F. 66 1/2% 7/8	200	157 1/2	157 1/2	+0 1/2	11.35
Int'l. F. 67 1/2% 7/8	200	158 1/2	158 1/2	+0 1/2	11.39
Int'l. F. 68 1/2% 7/8	200	159 1/2	159 1/2	+0 1/2	11.43
Int'l. F. 69 1/2% 7/8	200	160 1/2	160 1/2	+0 1/2	11.47
Int'l. F. 70 1/2% 7/8	200	161 1/2	161 1/2	+0 1/2	11.51
Int'l. F. 71 1/2% 7/8	200	162 1/2	162 1/2	+0 1/2	11.55
Int'l. F. 72 1/2% 7/8	200	163 1/2	163 1/2	+0 1/2	11.59
Int'l. F. 73 1/2% 7/8	200	164 1/2	164 1/2	+0 1/2	11.63
Int'l. F. 74 1/2% 7/8	200	165 1/2	165 1/2	+0 1/2	11.67
Int'l. F. 75 1/2% 7/8	200	166 1/2	166 1/2	+0 1/2	11.71
Int'l. F. 76 1/2% 7/8	200	167 1/2	167 1/2	+0 1/2	11.75
Int'l. F. 77 1/2% 7/8	200	168 1/2	168 1/2	+0 1/2	11.79
Int'l. F. 78 1/2% 7/8	200	169 1/2	169 1/2	+0 1/2	11.83
Int'l. F. 79 1/2% 7/8	200	170 1/2	170 1/2	+0 1/2	11.87
Int'l. F. 80 1/2% 7/8	200	171 1/2	171 1/2	+0 1/2	11.91
Int'l. F. 81 1/2% 7/8	200	172 1/2	172 1/2	+0 1/2	11.95
Int'l. F. 82 1/2% 7/8	200	173 1/2	173 1/2	+0 1/2	11.99





# BANCO DO BRASIL S.A.

CONSOLIDATED AND CONDENSED COMPARATIVE STATEMENT OF CONDITION  
IN MILLIONS OF U.S. DOLLARS

Assets	31.12.74	31.12.75	31.12.76	31.12.77	31.12.78
Cash and due from banks	1,021.0	1,142.0	1,344.7	1,098.1	2,767.7
Loans	20,856.9	26,166.8	31,932.4	39,023.9	42,499.8
Securities	338.7	429.7	506.9	729.8	1,010.0
Bank premises and equipment	356.6	373.4	370.3	900.7	815.0
Other assets	663.2	1,094.4	4,772.4	4,983.9	1,965.3
<b>TOTAL ASSETS</b>	<b>23,236.4</b>	<b>29,206.3</b>	<b>38,926.7</b>	<b>46,736.4</b>	<b>49,057.8</b>
Liabilities	31.12.74	31.12.75	31.12.76	31.12.77	31.12.78
Capital and reserves	1,709.0	2,457.5	2,688.6	3,547.5	4,057.5
Deposits	15,007.8	17,537.7	23,226.3	26,565.1	22,729.2
Demand	8,183.2	9,129.6	9,839.7	11,019.8	8,059.9
Time	6,824.6	8,408.1	13,386.6	15,545.3	14,669.3
Funds borrowed	1,147.8	1,367.4	1,504.0	1,760.7	8,654.2
Funds for refinancing	3,301.6	5,882.5	8,014.0	11,341.5	11,804.3
Other liabilities	2,070.2	1,961.2	3,493.8	3,521.6	1,812.6
<b>TOTAL LIABILITIES</b>	<b>23,236.4</b>	<b>29,206.3</b>	<b>38,926.7</b>	<b>46,736.4</b>	<b>49,057.8</b>

The figures shown above are the conversion of Cruzeiros into U.S. dollars at the rate prevailing on the respective balance sheet dates.  
\*1978 figures comply with the new Brazilian Corporate Law (Law No. 6,404, of 15.12.78)

## FOREIGN NETWORK

London, Paris, Paris-Opera, Hamburg, Frankfurt, Amsterdam, Rotterdam, Milan, Vienna, Rome, Lisbon, Madrid, Stockholm, Zurich, Geneva, Luxembourg, Brussels, New York, San Francisco, Los Angeles, Chicago, Washington, Toronto, Mexico City, Tokyo, Abidjan, Grand Cayman, Panama City, Colón, Buenos Aires, Montevideo, Ciudad Vieja, Paysandu, Rivera, Asunción, Puerto Presidente Stroessner, Santiago de Chile, Antofagasta, Concepción, Valparaíso, La Paz, Singapore, Santa Cruz de la Sierra, Cochabamba, Bogotá, Caracas, Lima, Quito, Manama-Bahrain, Tehran, Lagos and Sydney.

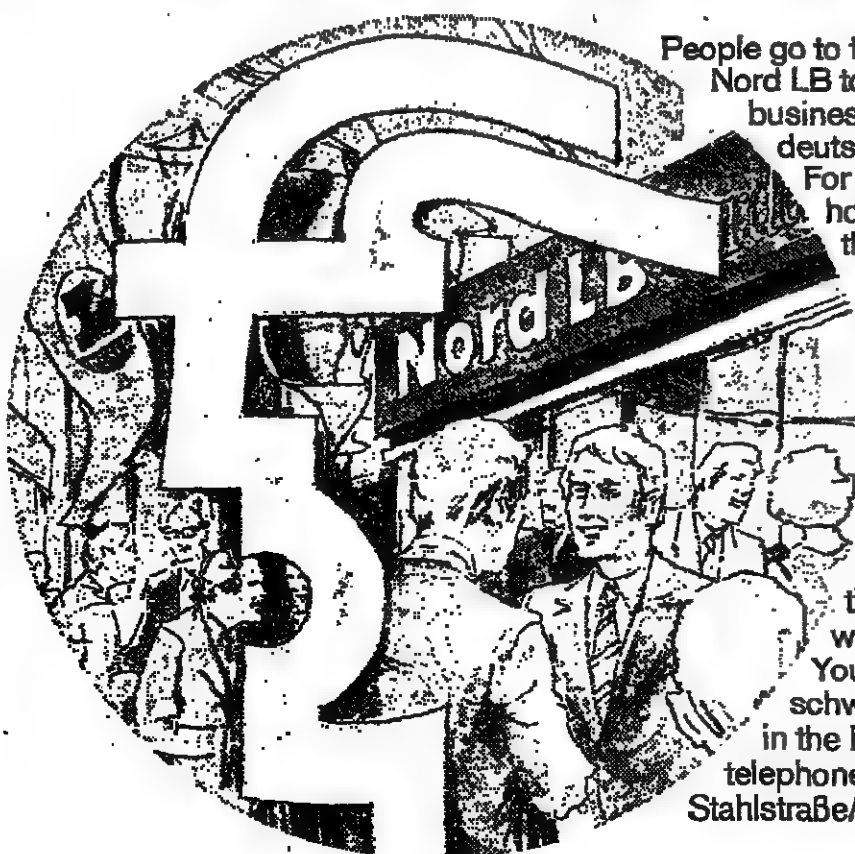
New branches and representative offices to be opened shortly in other countries.

Banking correspondents throughout the world, and over 1,200 full branches in Brazil:

## LONDON BRANCH

15/17 King Street, EC2P 2NA.  
Telephone: 01-606 7101. Telex: 8812381

# Bank Service International



People go to the Hannover Fair to do business across frontiers, and to Nord LB to transact international financial business. If you want to do business successfully in Germany, you should choose the Norddeutsche Landesbank (Nord LB for short) as your partner.

For we offer you more than just financial strength and know-how: we have the contacts with industry and government that you need - all over Germany and specially in Land Lower Saxony. So you too can benefit from our particular advantages of location, for Nord LB's home ground, Hannover, is also the home of the world's most important industrial trade fair.

The Hannover Fair offers an unrivalled entrée into German business circles - and Nord LB is delighted to effect the introductions. With us as partners you have an inside track of many profitable, forward-looking investment opportunities in the Federal German Republic. We know the rewarding outlets for investment or acquisition finance. Our banking service is international - so let's work together!

You can find us in the city centres of Hannover and Braunschweig, in the service area at Hannover-Langenhagen airport, in the Bankenallee at the Hannover-Laatz exhibition site, telephone 0511/89 76 48-49, and in the Niedersachsen-Pavillon at Stahlstraße/Mannheimer Straße, telephone 0511/89 26 81.

## Norddeutsche Landesbank

Girozentrale  
Hannover - Braunschweig

Georgsplatz 1  
D-3000 Hannover 1  
Tel. 0511/103-1  
Telex 922 073

Nord LB-Zentrum  
D-3300 Braunschweig  
Tel. 0531/487-1  
Telex 942 540

Norddeutsche Landesbank  
International S.A.  
29, Avenue Monterey  
Luxembourg (0 0352) 47 23 911

Central Bank of the Lower Saxony savings banks

Companies  
and Markets

## INTL. COMPANIES and FINANCE

### Sharp advance by Austrian bank

BY PAUL LENDVAY IN VIENNA

VIENNA-BASED Centro Bank, which is primarily engaged in financing East-West trade, is raising its dividend from 4.5 per cent to 6 per cent for 1978 on the back of a rise of 33 per cent in profits to Sch 5.05m (\$309,692). The bank is also increasing its capital from Sch 84m to Sch 168m.

The Board also announced that the consolidated balance sheet last year, compared to 1977, was up by 12.9 per cent to Sch 2,290m.

Speaking at a press conference about the last business year, Dr. Gerhard Vogt, the director pre-

dicted that the role of compensation deals would continue to increase in East-West trade. The bank estimates the share of such compensation deals at 10 per cent of the current business between East and West. Centro Bank is also engaged in switch deals and the spokesman specifically referred to clearing arrangements between East Germany and Greece.

As a result of doubling its basic capital Centro has become the foreign bank with the largest capital in Vienna. The bank also deals in West European and North African business but is not engaged in making commercial loans to Austrian clients if these are not connected with international trade.

It was also revealed that last year the number of counterpurchase orders placed in connection with east-west trade doubled compared to 1977-78 which meant a growing burden for western exporters. The situation is made even more difficult by the trend towards finished manufactures offered by some eastern states which are particularly difficult to be marketed in order to facilitate access

for Poland to the western markets. The bank will organise a delegation of importers to Poland in mid-June. The delegation will consist of 10 to 15 importers. Dr. Vogt referred to such sectors as furniture and electrical goods offering the best business opportunities.

The bank was founded here five years ago by seven banks: Bawag of Vienna, Banco di Sicilia, Banco Popular Español, Bank Handlowy Warszawski, Banque Occidentale pour l'Industrie et le Commerce, Kleinwort Benson, and the Bank of Tokyo.

### Slavenburg's raises dividend

BY CHARLES BATCHELOR IN AMSTERDAM

SLAVENBURG'S Bank reports a slight increase in the rate of both profit and balance-sheet growth in 1978. The Rotterdam-based bank, in which First National Bank of Chicago has an 11 per cent stake, proposes to increase its dividend to F1 21.50 per share from F1 20.

Net profit rose by 16 per cent to F1 34.9m (\$17.4m) compared with an increase of 15 per cent the year before. The balance sheet total also rose 16 per cent to F1 8.6bn (\$4.3bn) at the end of the year after an increase of 14 per cent in 1977.

Profit per share rose 16 per cent to F1 33.30 after allowing for the stock dividend paid in 1978. Shareholders may opt to take the dividend fully in cash or cash and shares. Slavenburg's share capital rose to F1 103.7m from F1 98.8m.

The bank's figures for the year as a whole reveal a slowdown in profit growth from the

21 per cent increase recorded in the first half.

The Unico banking group, which links the co-operative banking organisations in six European countries, has set up an investment fund with certificates listed on the Luxembourg Stock Exchange. The Unico Investment Fund has a daily quotation and has been started with an initial subscription of Dfl 20m.

The bearer share certificates, including selling commission, were offered at Dfl 52. The fund aims to invest primarily in bonds but it may purchase other securities to a maximum of 30 per cent of its assets. It is managed by Unico Investment Fund Management Company SA of Luxembourg.

The new fund is backed by the six Unico banking group members—Andelsbanken Danmark of Copenhagen, Caisse Nationale de Crédit Agricole of

Paris, Centrale Rabobank of Utrecht, DG Bank of Frankfurt, Genossenschaftliche Zentralbank of Vienna, and Okobank of Helsinki as well as two affiliated banks, Bank Euro-paelscher Genossenschaftsbanken of Zurich and London and Continental Bankers of London.

● Roreto, the Dutch investment fund specialising in fixed interest securities, proposes cutting its 1978/79 dividend. This is the first time the fund has cut its payment since it was set up nearly five years ago.

Although it warned last year that the favourable developments of the first few years would not necessarily be continued in the future.

It proposes paying F1 4.40 in cash plus 5 per cent in stock from the share premium reserve compared with F1 4.65 and 5 per cent the year before. The shares go ex-dividend on May 30.

### Rothschild head steps down

By Terry Dodsworth in Paris

M. GUY DE ROTHSCHILD is giving up overall direction of Banque Rothschild, the investment bank which lies at the heart of the traditional Rothschild family interests in France. After 30 years as president he is handing over to M. Elie de Rothschild, his cousin.

The change comes at a time of rumours of changes in the bank as a younger generation moves into positions of influence. Although M. Elie de Rothschild, at 61, is of a similar generation to M. Guy de Rothschild, who will shortly be turning 60, the posts are now directed by younger members of the family.

Last year Banque Rothschild made a net attributable profit of FFR 10.2m (\$2.4m) but this was reached after making provisions of FFR 10.4m to cover depreciation on certain of its participation ventures and risks attached to its current activities. It is proposed to declare a dividend of FFR 10.50 a share.

The bank's total balance sheet amounted to FFR 10.1bn after the absorption of Compagnie du Nord, another of the Rothschild-controlled holding companies, last December. Equity funds amounted to FFR 609m and property was valued at FFR 770m.

### Belgian power group ahead

By Giles Merritt in Brussels

EBES, the Sociétés Reunies d'Energie du Bassin de l'Escaut, which is Belgium's second largest power company, has announced a 21 per cent increase in its 1978 net profits over those of the previous year. The company's net earnings reached BFR 3,085m (\$101m), as against BFR 2,590m in 1977 and BFR 2,160m in 1976.

With its three year 1978-80 investment programme in nuclear generation due to total BFR 2,800m, EBES has announced that it will not be seeking an increased dividend on its higher earnings. In line with its dividend policy in 1978 and 1977, the company will be maintaining its dividend on its 11m old shares of BFR 177 per share.

The dividend, payable on the 22m new shares issued a year ago in a one-for-five rights issue, will also stay unchanged at BFR 132.7 per share.

### BEC steps up earnings

By Our Financial Staff

INCREASES in profits and balance sheet total - are announced by Banque Européenne de Crédit, the Brussels-based consortium bank controlled by seven major European banks including in the UK the Midland Bank.

Net profits in 1978 moved up to BFR 497m (\$17m) from BFR 431m, a rise of 15 per cent, and a dividend of 12 per cent is to be paid. At the end of last year, the bank's balance sheet total had expanded to BFR 90,75m which is 6 per cent ahead of the figure at the end of 1977. In terms of dollars, BEC's balance sheet total increased by almost a fifth.

### Swedish bank welcomes new international stance

BY JOHN WALKER IN STOCKHOLM

ANY MOVE by the Swedish government to allow foreign banks greater access to capital and credit markets in this country would be welcomed by Svenska Handelsbanken, one of the big three banks in Sweden.

This was stated at the annual general meeting of Handelsbanken by Mr. Jan Ekman, head of the bank's international activities who went on to list a number of conditions. Foreign banks would need to compete on the same terms as domestic banks and at the same time Swedish banks should be allowed equal rights to extend their business abroad, he said.

Mr. Ekman was referring to proposals put to the Swedish parliament recently by the committee appointed by the government to study Swedish banking and financial market practices. The proposals came down strongly in favour of wider banking participation in Sweden.

The total volume of lending in foreign currency which the Swedish banks have made on their home market, has increased from practically nothing in 1973 to more than the equivalent of \$2.6bn at the end of 1978. At the year end, Handelsbanken's share of total Swedish lending in foreign currencies was 44 per cent.

This appears to be the first time that a Swedish bank has welcomed foreign banks operating in Sweden.

The necessity to borrow abroad has forced the Swedish authorities to introduce some temporary exceptions to the limitations in foreign exchange regulations. Thus Swedish banks are permitted to provide financing in foreign currencies to Swedish customers.

As a result of this development, foreign currency lending and refinancing by Swedish banks has increased dramatically over the last five years, Mr. Ekman said.

The total volume of lending in foreign currency which the Swedish banks have made on their home market, has increased from practically nothing in 1973 to more than the equivalent of \$2.6bn at the end of 1978. At the year end, Handelsbanken's share of total Swedish lending in foreign currencies was 44 per cent.

## TURKISH TEXTILES

### Aiming to invade Europe

BY METIN MUNIR IN ANKARA

FASHION IS a bluff, says Mr. Vitali Arthur Hakkio, the owner of Vakko. Turkey's largest ready-to-wear clothing company who is preparing for what he calls "the biggest gamble of my life."

Next month he is putting on a fashion show in London's New Bond Street as part of a sales campaign in the ready-to-wear market where the foothold of Turkish companies is currently insignificant. Mr. Hakkio hopes that this step towards Europe can usher in a powerful new era for the Turkish textiles industry.

The ready-to-wear industry in Turkey is large enough to clothe a population of 45m. In fact Turkey is one of eight countries in the world which do not import any clothing. Its single biggest export commodity is cotton and textiles account for a quarter of all industrial exports.

Such is the strength of these industries that the Common Market, of which Turkey is an associate member, has imposed restrictions on some products in order to protect local industries.

Thus restrictive tariff barriers are imposed in order to slow the growth of Turkish sales to the EEC. However, for the moment no problems exist on "ready-to-wear" clothing. Mr. Hakkio is confident that this is one area of the Turkish clothing market that can be expanded rapidly.

Mr. Hakkio, who is an Armenian Turk, started work in 1927 when he was 14. His first job was to stand outside a clothing shop at the Mahmut-pasa Cimbirli—which is still one of the biggest clothes shopping centres of Istanbul—and entice customers.

Today, Vakko, still a family concern, is now a vast business employing about 1,000 people

and planning a turnover of Turkish Lira 1bn (\$50m) this year. Apart from the ready-to-wear manufacturing plant and a chain of retail stores, Vakko manufactures in metres of print a year. Its stores are the plushiest and most expensive in Turkey.

Turkish manufacturers realised that unless they exported their domestic markets, Turkish industrialists are now trying hard to export, even at a loss.

Other prominent companies in ready-to-wear clothing like Beymen and IGS, are also selling to Europe. The low-cost element and high quality may, over the years, make these companies major sellers to Europe. "I can tell you we are late," says Mr. Hakkio. "We should have been there years ago."



## MALAY-DESIGNATED AGENCIES

## State raises financial stake by 60%

BY WONG SULONG IN KUALA LUMPUR

MALAYSIAN Government increased the financial stake in its "Malay-designated companies" by 60 per cent to 37.6m under the mid-term review of the third Malaysia plan to enable them achieve the twin objectives of creating a stable-running business community and ensure that at least 30 per cent of the modern corporate sector is in Malay control by the year 2000.

The five groups, designated "Malay" agencies for the purpose, are: the Pemas Development Authority; the Urban Development Authority; the Putra Investment Foundation; the various State Economic Development Corporations (SEDCs).

Under the third Malaysia plan (1976-1980), these five groups were allocated a sum of 1,372m Ringgit for their programmes, but this has been increased by 60 per cent to 2,200m Ringgit under the mid-term review of the plan.

The biggest increase went to the Bumiputra Investment Foundation, the original, 200m Ringgit, allocation of which has been raised to 500m Ringgit.

The Foundation, under the chairmanship of Dr. Mahathir Mohamed, the Deputy Prime Minister, is charged with buying for Malays shares issued by private companies.

Since it was launched a year ago, it had invested more than 50m Ringgit in shares, and currently it is a major shareholder in such companies as Sime Darby, Kuala Lumpur-Kepong, East Asiatic Malaysia, and Malaysian Tobacco Company, as well as in other smaller, but profitable, companies.

The increased allocation gives the foundation greater freedom to buy up shares and hold them in trust for the Malays, as also to participate in joint ventures with the private sector.

The Urban Development Authority, which is charged with developing urban properties for the Malays, has had

its allocation increased from 217m Ringgit to 300m Ringgit. Its biggest project is the development of a 200m Ringgit commercial complex in Kuala Lumpur, planned to include a 60-storey international trade centre.

The Pemas Organisation, which is known internationally for its interest in Malaysian Mining Corporation and Sime Darby, has now been allocated 322m Ringgit for its expansion plans, instead of 200m Ringgit.

The various SEDCs have had their allocations increased from 440m to 680m Ringgit.

Mar, which is involved in the purchase of shares and granting of loans to small Malay

businessmen, has received the relatively small increase in allocation of 315m to 338m Ringgit.

The Malaysian Ministry of Trade and Industry has approved foreign investments in Malaysia totalling 159.4m Ringgit so far this year, Reuter reported from Kuala Lumpur.

The Ministry said that of the total, Japanese investment amounted to 41.2m Ringgit, European 81m and U.S. 24.2m.

The Ministry is to send missions to Milan, Munich, Manchester, Hong Kong, South Korea, Japan and Scandinavia this year to attract more investment.

then make a bid at whatever price level they wished. However, some observers believe Email and Simpson Pope will try to obtain a compromise involving a joint offer to acquire the remaining shares in Kelvinator at a price above that originally offered by Email, but below the heavy levels touched during the market battle. This would need waiving of the listing requirements by the stock exchange because of special circumstances.

## Merlin's faster growth rate

Our Kuala Lumpur correspondent

ER MERLIN, the Malaysian and property group, has had a 20 per cent rise in profits to 2.8m Ringgit (\$1.27m) for the first half of December.

A group said it expected half results to be even higher than the first half, though no indication was given whether the full year's would reach the 6.5m forecast by Mr. Chang Thien, chairman, in his report.

The group's property on and hotels turned in satisfactory results, and this is expected to continue in the second half.

The demand for the group's shares in Kuala Lumpur and on the business centre at Puchong estate in Kuala Lumpur is expected to start a group's six hotels to higher occupancy, particularly the Merlin in Kuala Lumpur, whose occupancy rate rose from 70 to 80 per cent, and turned in a profit of 800,000 Ringgit for the first half.

## Email returns to negotiation

BY JAMES FORTH IN SYDNEY

THE STRUGGLE for control of the white goods maker, Kelvinator Australia, moved from the sharemarket to the negotiating table yesterday after the disclosure that Simpson Pope Holdings was the mystery buyer which had been contesting Email in the market.

Simpson Pope revealed before the start of stock exchange trading yesterday that it had acquired 5.1m Kelvinator shares or 32 per cent of the capital.

The Simpson Pope board also said that discussions would take place later in the day between the chairman and managing directors of Simpson Pope and Email.

When trading began it was apparent that both Email and Simpson Pope had pulled out of the market for Kelvinator. With the buying support missing, the price of Kelvinator shares plunged 95 cents to A\$1.85.

The chairman and managing director of Simpson Pope were holding talks at the head office of Email last night.

The Kelvinator board

released a report before the start of trading which said they believed that the market contest had pushed Kelvinator shares at a price which exceeded the "commercial value" of the company.

Explaining their actions, the Simpson Pope directors said that their company and Kelvinator had had a close association over a long period and had been implementing a programme of product rationalisation when it became apparent about six weeks ago that there had been increased levels of share turnover in Kelvinator. Simpson Pope had started buying to protect its position in the industry.

After the announcement on March 16 of Email's original share and cash offer it had been decided to increase substantially the company's investment in Kelvinator. They said Simpson Pope shareholders would be advised of any further developments.

The directors of Kelvinator said they were concerned about the activity in the shares over

recent days. It appeared that rival bidders were endeavouring to gain a strategic position and had pushed the share price to levels which the directors believed to be unrealistic.

They said that Email had foreshadowed a partial offer of A\$2.30 cash for up to 50 per cent of the capital but, unless, and until, it materialised the directors felt unable to comment other than to say that it would appear to be discriminatory and would not treat all shareholders equally.

The recent events on the market have overtaken the proposed partial offer. Under the buying competition, the price had soared to touch A\$2.82. If Email went ahead with its offer, or if Simpson Pope decided to bid, they would each have to match the highest price paid.

There is little chance that either company would bid as much as A\$2.82, which values Kelvinator at more than A\$45m (US\$50.5m), compared with the original value placed by Email of A\$26m. Either company could wait three months and

then make a bid at whatever price level they wished. However, some observers believe Email and Simpson Pope will try to obtain a compromise involving a joint offer to acquire the remaining shares in Kelvinator at a price above that originally offered by Email, but below the heavy levels touched during the market battle. This would need waiving of the listing requirements by the stock exchange because of special circumstances.

## Parent vs upturn

THE major Japanese parent credit company, which has had its parent company profit in the year to end 1978 rise 12.4 per cent to 12,478m yen (\$94.78m) from 11,140m yen before, Reuter reports Tokyo.

The parent's profit rose 7.7 per cent to 77bn yen (\$600m) from 70bn. Its current account profit was 115,320m yen, up from 113,450m yen a year ago.

The year-end dividend payment of 113 yen per share, up from 111 yen, and a special dividend of 1 yen per share, up from 77 yen, were also announced.

## JAPANESE SHIPBUILDERS' ANNUAL DIVIDEND

(yen per share)	1978-79	1977-78
Shiobaru Shipbuilding	3	5
Kawasaki	3	6
Asahi	3	6
Utsunomiya	4	6
Utsunomiya Shipbuilding	3	5
Utsunomiya HI	3	6

The table above gives details of cuts in dividends paid by Japanese shipbuilders for the fiscal year 1978-79. The background to cuts was described in today's issue.

Utsunomiya-Harima Heavy Industries expects sales for year of ¥700bn (\$3.4bn), a 10 per cent rise from 1977-78, and a current loss of 5bn (\$22m), against a profit of ¥35bn in the previous year.

## Trust Bank recovery under way

BY JIM JONES IN JOHANNESBURG

TRUST BANK, the South African general bank which is slowly recovering from its problems of two years ago, has revealed a 90 per cent profit improvement to R1.5m (\$1.77m) compared to R757,400 for the six months to December 31, 1977.

But there is still no prospect of a resumption of ordinary dividends for at least four years.

Dividends of the R25m 11.5 per cent cumulative convertible preference shares held by hold-

ing company Bankorp absorbed the bulk of the declared half profit. Effectively, Trust Bank's hidden reserve base had shown little or no growth since 1972, meaning that for at least the next three years all profits not needed to service the preference shares will be directed into reserves.

Trust Bank is, however, steadily recovering. Savings deposits are growing with improving confidence while the

cost of new funds has been cut by a considerable narrowing of the gap in interest rates on the bank's negotiable Certificates of Deposit.

The interim report points out that earnings on the bank's large property portfolio have shown no noticeable improvement, while financing of the property portfolio has still to be re-formulated. Trading at 53 cents in Johannesburg, the share is near its three-year high.

## FVB portfolio changes boost turnover

BY JIM JONES IN JOHANNESBURG

THE SOUTH AFRICAN investment company Federale Volksbelegings (FVB) has reported a 136 per cent increase in turnover to R425m (\$505m) (1977, R181m) for the 12 months to December 31.

Over the past year, major changes have been made in the group's investment portfolio. The 11.9 per cent stake in Federale Myrbou was sold to the insurance company, Sanlam, in November, while food pro-

cessor subsidiary Federale Voedsel acquired a 51 per cent interest in major South African flour miller, Ronto. Meantime, in a move away from indirect portfolio holdings, it is planned to sell the 66 per cent holding in furniture manufacturer, Asmar, effective April 1, while simultaneously repurchasing Asmar's major assets.

Though pre-tax income for the past 12 months rose 81 per cent to R30m from R16.6m in 1977, earnings attributable to ordi-

nary shareholders only managed a 16 per cent increase to R8.3m.

FVB maintained its interim dividend at 7 cents, and has declared an additional special interim dividend of 4 cents for the 6 months to December 31. Management has given no indication whether 1977's 8 cent final dividend will be repeated in June.

In Johannesburg, FVB shares are trading at 215 cents, little changed on publication of the second interim report.

## Hutchison-Boag hopes to be out of the red this year

BY HUGH PEYMAN IN HONG KONG

HUTCHISON WHAMPOA's construction and trading subsidiary, Hutchison-Boag, hopes to return to profit this year after reporting an increased attributable loss of HK\$33.77m (US\$6.9m) for 1978, nearly three times its HK\$11.25m 1977 loss.

Hutchison-Boag said that it did not have to make further provisions in the second half of this year, as provisions of HK\$34.04m had been made in

the first half for losses incurred by the group's construction and contracting divisions.

The group went into deficit in the second half of 1977 and the losses mounted as increases in labour and material costs incurred in its construction work.

Hutchison-Boag (57 per cent owned by Hutchison Whampoa) has again passed its final dividend. This leaves a total for the year of 2 cents (nil previously).

## Sharp rise at Singapore steel mill

By H. F. Lee in Singapore

SINGAPORE'S only steel mill, National Iron and Steel Mills, last year recorded a substantial rise in profits. Group profit after tax increased 77.4 per cent to S\$21.7m (US\$9.95m).

Pre-tax profit, however, rose by a faster rate of 118 per cent to S\$37.7. Tax provisions of S\$16m were slightly more than three times higher than the previous year's figure.

This announcement complies with the requirements of the Council of The Stock Exchange in London.

ESSELTE

AKTIEBOLAG

(Incorporated in the Kingdom of Sweden with limited liability)

U.S. \$25,000,000

7 3/4 per cent. Convertible Subordinated Bonds 1989

ISSUE PRICE 100 PER CENT.

The following have agreed to subscribe or procure subscribers for the Bonds:

Skandinaviska Enskilda Banken	Hambros Bank Limited
Algemene Bank Nederland NV	Credit Suisse First Boston Limited
Morgan Stanley International Limited	Svenska Handelsbanken
	Swiss Bank Corporation (Overseas) Limited
	Deutsche Bank Aktiengesellschaft

The Council of The Stock Exchange in London has granted permission for the 25,000 Bonds of \$1,000 each constituting the above issue to be admitted to the Official List, subject to the issue of the Bonds. Interest is payable annually on 15 May, the first such payment being due on 15 May 1980.

Particulars of the Bonds are available from Exel Statistical Services Limited and copies may be obtained during usual business hours up to and including 19 April, 1979, from the Brokers to the issue:—

Rowe & Pitman, Hurst-Brown, City-Gate House, 39-45 Finsbury Square, London EC2A 1JA and The Stock Exchange

Strauss, Turnbull & Co., 3 Moorgate Place, London EC2R 6HR and The Stock Exchange

## Sponsored by O.E.M. Design Magazine MICROPROCESSORS FOR YOUR COMPANY

An Introductory one day Course for Management

A series of seminars to provide management with a basic understanding of micro electronic technology. The presentation will be directed towards your company's use in redesigning products and modifying automation and processing systems with working examples of equipment.

26 APRIL, repeated 30 MAY, 28 JUNE at the Royal Overseas League, St. James's, S.W.1. Fee £75 + VAT. Further information from ALLTECK (TECHNOLOGY INITIATIVES) LTD., 55/56 Paul Mall, London SW1Y 5JH. Telephone 01-439 1563 Telex 8813252 Centre

Weekly net asset value on March 28th 1979

Tokyo Pacific Holdings N.V. U.S. \$64.43

Tokyo Pacific Holdings (Seaboard) N.V. U.S. \$46.95

Listed on the Amsterdam Stock Exchange

Information: Pierson, Holding & Pierson NV Herengracht 214, Amsterdam.

VONTSEL EUROBOND INDICES					
145.76=100%					
PRICE INDEX	20.3.79	27.3.79	AVERAGE YIELD	20.3.79	27.3.79
DM Bonds	102.81	102.79	DM Bonds	8.549	8.552
HFL Bonds & Notes	99.23	99.40	HFL Bonds & Notes	8.453	8.454
U.S. \$ Strt. Bonds	95.74	96.03	U.S. \$ Strt. Bonds	9.584	9.528
Can. Dollar Bonds	96.49	96.56	Can. Dollar Bonds	10.049	10.037

CLIVE INVESTMENTS LIMITED

1 Royal Exchange Ave., London EC3V 3LU. Tel: 01-283 1101.

Index Guide as at March 28, 1979 (Base 100 on 14.1.77)

Clive Fixed Interest Capital ..... 146.82

Clive Fixed Interest Income ..... 121.50

ALLEN HARVEY & ROSS INVESTMENT MANAGEMENT LTD.

45 Cornhill, London, EC3V 3PB. Tel: 01-423 6314.

Index Guide as at March 22, 1979

Capital Fixed Interest Portfolio ..... 107.05

Income Fixed Interest Portfolio ..... 103.12

This announcement appears as a matter of record only.

February 1979

Saudi Riyals 79,443,178 (U.S. \$23,800,000 equivalent)

## PHILIPPINE-SINGAPORE PORTS CORPORATION

"PHILSINPORTS" (a subsidiary of Landoil Resources Corporation)



Syndicated Guarantee Facility for their activities in the Kingdom of Saudi Arabia

Partially guaranteed by Philippine Export and Foreign Loan Guarantee Corporation and Landoil Resources Corporation

Managed by CSFB AG (Credit Suisse First Boston)

Arab International Bank - Cairo Arab-Malaysian Development Bank

Banque du Caire Credit Suisse National Bank of Abu Dhabi

Al-UBAF Group

Provided by

Alahli Bank of Kuwait K.S.C. Arab International Bank - Cairo Al Saudi Banque

Arab-Malaysian Development Bank Banque du Caire Burgan Bank S.A.K. - Kuwait

Credit Suisse National Bank of Abu Dhabi UBAF Bank Limited

UBAN-Arab Japanese Finance Limited Union de Banques Arabes et Françaises - U.B.A.F.

Issuing Bank Credit Suisse

Agent Bank Credit Suisse First Boston Limited

This announcement appears as a matter of record only.



## CHEIL SYNTHETIC TEXTILES CO., LTD.

A MEMBER OF THE SAMSUNG GROUP, REPUBLIC OF KOREA

US \$12,000,000 Medium Term Loan Facility

guaranteed by Samsung Co. Ltd. Cheil Wool Textile Co. Ltd.

managed by J. Henry Schroder Wagg & Co. Limited

co-managed by Scandinavian Bank Limited

provided by Midland and International Banks Limited The Royal Bank of Canada Trust Corporation Limited J. Henry Schroder Wagg & Co. Limited Samuel Montagu & Co. Limited Scandinavian Bank Limited Standard Chartered Merchant Bank Limited







## Indices

**NEW YORK**—DOW JONES

otherwise easier-inclined Australian markets yesterday.

BHP improved 10 cents. to A\$11.30 on the new OPEC oil price rise.

Among Minings, Metals

Exploration gained 4 cents to 78 cents and Bougainville Copper 3 cents to A\$1.94, while Hamersley, AS2.75, and CRA, AS3.75, put on 5 cents apiece.

Central Norseman Gold moved up 50 cents to A\$20.00, but most Gold issues eased.

Coals had Thiss 10 cents higher at A\$3.00 and Utah 5

The decisions by Email and Simpson Pope, the two take-over contestants for Kelvinator, to discontinue their stock market battle to acquire Kelvinator shares and instead enter into negotiations with Kelvinator caused the bid candidate's shares to fall back to \$81.85, before

ending a net 96 cents down at \$A1.85. This compares with the recently revised partial bid of \$A2.30 cash per share from Email, which shed 2 cents more to \$A1.06.

## Hong Kong

After Tuesday's retreat, stocks made a mixed showing yesterday in light trading.

Jardine Matheson rose 30 cents to HK\$12.10 ahead of results, due next week, while Cheung Kong, with results due today, gained 30 cents to HK\$11.20.

Hong Kong Bank, Hong Kong

Land and Hong Kong Wharf  
were unchanged at HK\$13.20,  
HK\$7.70 and HK\$34.00 respec-  
tively.

## Johannesburg

Gold shares generally edged  
further ahead in slow trading,  
helped by a slightly firmer  
Bullion price.

Special dividend. <sup>1</sup> Dividend. <sup>2</sup> Dividend. <sup>3</sup> Dividend. <sup>4</sup> Dividend. <sup>5</sup> Dividend. <sup>6</sup> Dividend. <sup>7</sup> Dividend. <sup>8</sup> Dividend. <sup>9</sup> Dividend. <sup>10</sup> Dividend. <sup>11</sup> Dividend. <sup>12</sup> Dividend. <sup>13</sup> Dividend. <sup>14</sup> Dividend. <sup>15</sup> Dividend. <sup>16</sup> Dividend. <sup>17</sup> Dividend. <sup>18</sup> Dividend. <sup>19</sup> Dividend. <sup>20</sup> Dividend. <sup>21</sup> Dividend. <sup>22</sup> Dividend. <sup>23</sup> Dividend. <sup>24</sup> Dividend. <sup>25</sup> Dividend. <sup>26</sup> Dividend. <sup>27</sup> Dividend. <sup>28</sup> Dividend. <sup>29</sup> Dividend. <sup>30</sup> Dividend. <sup>31</sup> Dividend. <sup>32</sup> Dividend. <sup>33</sup> Dividend. <sup>34</sup> Dividend. <sup>35</sup> Dividend. <sup>36</sup> Dividend. <sup>37</sup> Dividend. <sup>38</sup> Dividend. <sup>39</sup> Dividend. <sup>40</sup> Dividend. <sup>41</sup> Dividend. <sup>42</sup> Dividend. <sup>43</sup> Dividend. <sup>44</sup> Dividend. <sup>45</sup> Dividend. <sup>46</sup> Dividend. <sup>47</sup> Dividend. <sup>48</sup> Dividend. <sup>49</sup> Dividend. <sup>50</sup> Dividend. <sup>51</sup> Dividend. <sup>52</sup> Dividend. <sup>53</sup> Dividend. <sup>54</sup> Dividend. <sup>55</sup> Dividend. <sup>56</sup> Dividend. <sup>57</sup> Dividend. <sup>58</sup> Dividend. <sup>59</sup> Dividend. <sup>60</sup> Dividend. <sup>61</sup> Dividend. <sup>62</sup> Dividend. <sup>63</sup> Dividend. <sup>64</sup> Dividend. <sup>65</sup> Dividend. <sup>66</sup> Dividend. <sup>67</sup> Dividend. <sup>68</sup> Dividend. <sup>69</sup> Dividend. <sup>70</sup> Dividend. <sup>71</sup> Dividend. <sup>72</sup> Dividend. <sup>73</sup> Dividend. <sup>74</sup> Dividend. <sup>75</sup> Dividend. <sup>76</sup> Dividend. <sup>77</sup> Dividend. <sup>78</sup> Dividend. <sup>79</sup> Dividend. <sup>80</sup> Dividend. <sup>81</sup> Dividend. <sup>82</sup> Dividend. <sup>83</sup> Dividend. <sup>84</sup> Dividend. <sup>85</sup> Dividend. <sup>86</sup> Dividend. <sup>87</sup> Dividend. <sup>88</sup> Dividend. <sup>89</sup> Dividend. <sup>90</sup> Dividend. <sup>91</sup> Dividend. <sup>92</sup> Dividend. <sup>93</sup> Dividend. <sup>94</sup> Dividend. <sup>95</sup> Dividend. <sup>96</sup> Dividend. <sup>97</sup> Dividend. <sup>98</sup> Dividend. <sup>99</sup> Dividend. <sup>100</sup> Dividend.

TOKYO

	Prices	↑ or ↓	Div. Yld.
	Yen	%	%
Asahi Glass	550	+5	14 2.0
Fuyo Bank	557	-12	18 1.1
Daikin	540	+5	25 1.5
Sanryo	585	+2	20 2.5
Yokohama Specie Print	532	+2	18 1.7
Yokohama Photo	558	-4	15 1.1
Yokohama	559	-1	13 2.9

London, Motora	478	-1	18 1.8
House Food	376	+5	58 1.5
Yokohama	478	-1	18 1.8
To Yokohama	1,490	-10	50 1.0
Acres	555		15 0.5
Alameda	2,580		10 0.5
Alameda	1,080		10 0.5
Komatsu	554	-5	18 2.5
Yokota	280	-1	18 2.7
Yokota-Ceramics	5,360	-640	58 0.5
Mitsubishi Ind.	673	+15	20 1.5
Mitsubishi Ind.	1,284		10 1.5
Mitsubishi Corp.	435		13 1.5
Mitsui & Co.	515	+5	14 1.5
Yokohama	1,410	-10	15 0.5
Yokohama	1,410	-10	15 0.5
Yokohama	744		13 0.8
Yokohama	880		16 1.3
Yokohama	570	-50	48 1.0
Yokohama	1,280		13 0.5
Yokohama	506	-2	50 0.5
Yokohama	1,100		30 1.0

ong	1,530	+10	40	1.4
ainia Maru	1,530	0	11	1.3
akechi Chem	1,530	0	11	1.4
DKK	1,870	+20	60	0.6
ejin	182	0	10	8.7
okyo Marine	474	0	11	1.3
okyo Elec Pow	889	0	11	1.3
okyo Sanyo	474	+21	13	1.5
oray	184	0	10	2.7
oshima Corp.	146	-3	10	5.4
oyota Motor	880	0	20	1.3

Source: Nikko Securities, Tokyo

**RUSSELLS/LUXEMBOURG**

Mar. 28	Price/Fr.	Div. + or - Net	Yld %
rbad	2,296	0	6.8
cekaert "B"	2,860	+40 116	6.8

[illegible]

SWITZERLAND		Price	+ or	Div.
Mar. 28	Fra.		%	%
Aluminium.....	1,450	+10	8	2.6
Copper 16.....	1,820	+10	8	2.6
Nickel 16.....	1,390	+25	22	1.7
Do. Part Cast.....	1,010	+20	23	2.2
Do. Reg.....	708	+2	23	5.1
French Sulphur.....	2,240	+10	10	4.4
Electrowatt.....	2,005			
Scher (Georg.).....	715	+6	8	5.5
Offman Port. 79,000		+1000	1100	1.4
Do. (Small).....	7,875	+50	110	1.4
Do. (Large).....	7,225	+25	81	2.2
Almalm (Fr. 100).....	1,500	+10	21	1.4
Asfle (Fr. 100).....	8,400	+25	24	5.4
Do. Reg.....	2,295			
Ericson 87,250.....	2,550	+15	100	2.6
Do. (Small).....	1,980			
Andor (F. 350).....	4,325	+25	26	1.5

Mar. 26	Price	+ or -	Div. Yld.
NIG.....	38	-1.5	—
atrigi.....	17	-16	—
at.....	5,599	-19	150 5.3
Devent.....	3,222	-23	150 5.6
holder.....	1	158	—
Micromet.....	16,350	-70	600 5.3

Alsidar	485	-	-
Medio Banco	35.680	-345	1.200 3.4
Montadison	201	2.75	-
Privati	1.171	+7	-
Reli & Co.	1.820	-55	130 7.0
Reli SpA	898	-24	80 8.8
Viscosa	1.010	-16	-

Lojas Amar O.P.	2.40	-0.83, 309.80	Ep. Vetsquez (400)	165	-
Petrobras P.P.	1.04	-0.05, 13.28	Hidrala	73.50	- 0.25
Pirelli OP.	1.62	-0.05, 16.68	Petrobras	71.50	+ 0.75
Sociedade Cruz OP.	1.91	+0.01, 21.16	Petrobras	100	-
Unipar P.P.	5.20	-0.10, 25.81	Sociedade	180.75	- 2.25
TeleRioDoce PP	1.50	-0.05, 17.38	Snage	47	+
			Sociedade	130	-
Turnover: Cr.80.4m. Volume 57.7m.			Telefonica	78	- 0.75
Source: Rio de Janeiro Sec.			Union Elec.	71.75	+ 1.26

Do. Reg.	708	+2	22	3.1
Credit Suisse	2,355		16	3.4
Electrowatt	2,040		10	0.4

Mar. 28	Price Lira	+ or -	Div. Yld. Lira %
---------	---------------	-----------	---------------------

Orange	230	+0.3	28.18	8.6	JAFPI	2.90	-1.0
L'Oréal	708	+16	15.98	8.3	Smith (C. G.) Sugar	5.85	+0.0
Legrand	1,610		36.75	8.3	SA Breweries	1.41	+2.2

Maire's Phoenix	541	+10	39.8	7.4	Tiger Oats and N. Mig.	11.85	+0.7
Michelini "B"	1,080	+10	37.5	3.7	Unisec	1.37	+0.0

Mocthemmesay	400	—	12.5	2.6
Moulinex	122	+7.6	3	2.5
Nord (Cle du)	86.1		2.25	8.7

**Financial Rand U.S.\$0.76½**  
(Discount of 35.5%)

Paribas.....	215.1	-2.9	10.15	4.7
Pechiney.....	77.4	+1.4	7.5	9.7

Peugeot	297	+6	7,5	2,6
Citroen	388	+2	17,25	4,4

Country	1984	1985	1986	1987
Radio Technique	419.5	+9.8	27	6.6
Redoute	457	+2	30	8.6

**SPAIN ♥**

Phone Poulenc,	107.9	+1.9	9	8.6	March 25	Per cent	
St. Gobain.....	135.8	+0.5	14.55	10.8	Alsatian	132	—
					Basque Central		

Suez	285.1	+0.2	27	9.5	Banco Exterior	284	- 4
Calamagoutte	280.0		27	9.5	B. Granada (1 000)	134	

Thomson Brandt	209	+1	15.15	7.5	Banco Hispano .....	273	—
Unión	11.80	+0.50	—	—	Bco. I. Cat. (1,000)	167	—

Bco. I. Mediterraneo	111	—
Banco Madrid	212	—

BRAZIL	B. Santander (250)	333	-	-
	Bco. Urquijo (1,000)	266	-	1
	Banco Vivenza	280		

Mar. 27	Price Cruz	+ or Cruz Yld — Div. %	Banco Paraguayo ... Banco Zaragozano ... Bankunion .....	253 253 152	— — 2
---------	------------	---------------------------	--	-------------------	-------------

Acosita	0.87	-0.03	0.12	13.79	Dragados	207	- 3
Bancodo Brazil	1.33	-0.02	0.12	9.02	Espanola Zinc	94	-

Banco Itaú PN...	1.34	+0.01	0.57	27.81	Recsa (1,000)	59	—
Geigo Mil'eira OP	1.11	-0.01	0.08	7.21	Gal. Precizados	69	+ 3
					Gr. Valenzuela (400)	155	

Gas Amer O.P.	2.04	-0.03	0.20	9.80	100	-
Petrobras PP....	1.40	-0.05	0.13	9.28	73.50	- 0.25
Brasil CB	1.42	-0.03	0.15	9.88	71.50	+ 0.25

Crude Oil	1.82	-0.08	0.18	9.88	Petroliber	100	-
Souza Cruz OP	1.91	+0.01	0.21	10.99	Petrobras	100.75	-2.25
Unip PE	5.20	-0.10	0.25	4.81			

Valor do Doce PP	1.50	-0.05 0.17 13.08	Snace	47	÷ 1
Turnover Cr.804m.			Sogetisa	130	
			Telefonica	78	

Source: Rio de Janeiro SE.	Union Elec. ....	71.75	+ 1.26
----------------------------	------------------	-------	--------

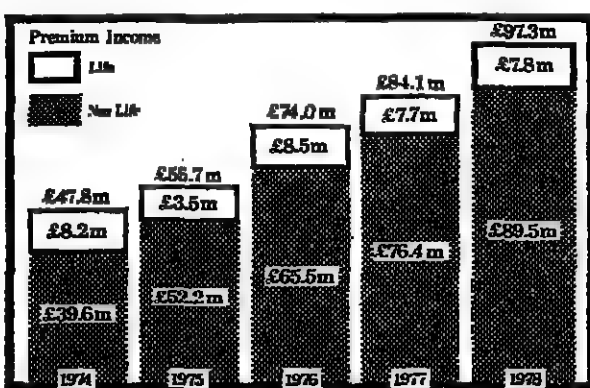


## Cornhill Insurance Group A Challenging Year

RESULTS	1978	1977
Premium Income	£000	£000
Fire and accident	85,631	72,582
Marine and aviation	3,901	3,859
Life	7,812	7,716
Profits		
Underwriting results:		
Fire and accident	(1,125)	681
Marine and aviation	(125)	(300)
Investment income	9,351	7,247
Shareholders' Life profits	75	75
Non-insurance company results	(14)	46
Profit before taxation	8,162	7,749
Taxation	3,575	3,850
Profit after taxation	4,587	3,899

1978 was a challenging year for the Group and although non-life premiums increased by 17% to almost £90m, profit moved ahead more modestly from £7.7m to £8.1m. United Kingdom In the motor account an increasing accident rate and a substantial rise in the cost of claims resulted in a small underwriting loss. The pecuniary loss, liability and engineering accounts produced satisfactory growth and underwriting profits. The household account continues to be a major problem area although progress was made during the year towards obtaining more adequate rating levels. Overseas Profits were below those reported in 1977 with underwriting losses in Canada, Australia and New Zealand. Elsewhere results were satisfactory with underwriting profits in Germany and Norway. The most important overseas development was the purchase at the end of the year of Ambassador Insurance Company, a specialty motor insurer in the U.S.A. Marine & Aviation There was continuing overcapacity and pressure on rates in the marine market and aviation claims were

severe. The result was an underwriting loss of £125,000. Life Further growth was achieved in regular premium business and good results were obtained from direct mail activities. Sales of single premium bonds were at a high level. Financial investment income rose by 29% to £9.35m. The Group's solvency ratio on a market value basis remains strong at 48%. Outlook 1979 may well be a difficult year. The widespread problems of household business are not yet solved and the bad weather and consequent high accident frequency in the UK at the beginning of 1979 will materially increase the cost of motor and household claims. Overseas the outlook is brighter and the newly acquired American subsidiary will make its first contribution to profit. Despite these problems Cornhill plans further expansion at home and overseas and looks forward to the future with confidence. Copies of the Report and Accounts may be obtained from the Secretary at 32 Cornhill, London, EC3N 3LJ.



**Cornhill Insurance Group**  
A member of the Thomas Tilling Group

## Britain's valve-makers: an industry under manifold pressures

BY RAY MAUGHAN

THE VALVE INDUSTRY is in deep recession. The problem lies not so much in any substantial volume decline as in new market entrants and new capacity added during the last boom. British manufacturers have tried to maintain market share at the expense of profitability.

Fierce international competition and subsequent margins erosion are not unique to valve producers, nor is their charge that certain overseas manufacturers are retreating at or below the cost of production. But rather than shed labour to pare costs, the valves industry now appears to be reaching up market to the high added value offered by sophisticated new products used, for example, by the power generation industry. The main concern for profits, shareholders and the 25,000-strong workforce in the UK valve industry is the extent to which manufacturers will continue to allow low profits and full employment in the event of a prolonged slump in their hope that higher technology will pave the way to important new markets.

The UK valve industry is one of dwarfs and giants. About 10 companies produce 50 per cent of total annual production, domestic sales value of which rose from £241.1m to £289.5m during 1977. The trend showing sales of £88.3m in 1977's final quarter and £72.3m in the following three months (the last period for which industry statistics are available) might be considered reasonably encouraging were it not for the subsequent revaluation of sterling and the growing industrial disruption which has begun to blight traditionally cordial labour relations.

These statistics exclude both very small valves used mostly in the home and those used in the oil exploration industry. The figures are made up from two very broad categories: general industrial valves produced from iron or brass and generally known as gate valves, and steel valves, which are supplied to process plant industries such as gas, oil refining, petrochemicals, food and brewing.

It is the process plant category which, in the words of Mr. Harold Grace, finance director of Pegler Hattersley, is subject to "boom and slump" conditions. The boom evaporated some 18 months ago.

Pegler is one of the two largest independent manufacturers in the UK. Its annual valve turnover, like that of Serck, is

around £40m. Pegler was essentially a tap manufacturer until its merger with Hattersley, ten years ago, added a significant presence in the non-ferrous gate valve market. Six months later, under the auspices of the Industrial Reorganisation Corporation, the company bettered Serck's offer for steel valve manufacture, Newman Hender, in a deal which gave Pegler a notable exposure to the process plant market. This market, says Pegler's managing director, Mr. Alex Louden, accounts for around £17.25m of total group turnover of £86m.

A further £15-£20m of the group's production is sold in the form of iron and non-ferrous gate valves, which have wide applications in general industry. The construction trades are major customers for such "bread and butter" products and Pegler is now enjoying the first signs of improved demand from this source.

The international market for gate valves has been very difficult. Exports usually account for around half of total valve sales. But such is the unrelenting nature of international competition that ferrous gate valve exports from the UK fell from £8m to £5m between the first quarter of 1977 and the comparable period in the following year, and accounted for almost all the drop in overall national sales from £14.3m to £11.3m.

### Effects offset

By international standards Pegler is considerably smaller than the U.S. gate valve producer, Crane, which sells valves worth some £100m annually around the world. Mr. Louden believes, however, that Pegler's wide product range and heavy marketing emphasis has helped to offset the worst effects of the world economic downturn.

Yet the market for steel valves used in the process plant industry looks appreciably more difficult than the gate valve sector. Keen competition has held prices down for the past two or three years while the price of steel castings, which Pegler has to buy in, has risen by an estimated 20-25 per cent over the same period.

Petrochemical valve volume, Mr. Louden estimates, is down by around a quarter from its 1976 peak and, with Rotterdam refineries operating at about 70 per cent of capacity, no immediate improvement from

these areas can be expected. There are some brighter points: Guest and Chirries, in which Pegler has a 40 per cent stake, enjoys "constant and fairly good demand" from the water treatment industry and Pegler is confident of an improvement from its McEvoy Oilfield Equipment associate—where Rockwell owns the 51 per cent majority—after a severe downturn in the energy exploration market in North America.

Despite increased activity in Pegler's important building products division, where sales amounted to £39m last year, the weakness of most areas of the steel valve industry is such that Pegler expects no more than maintained profits of around £12.8m this year.

Serck's problems, in the wake of a bitterly fought and ultimately unsuccessful takeover bid from Associated Engineering, have been widely chronicled. The defence forecast of £5m pre-tax for 1977 was comfortably beaten but profits in the following year slipped back by more than £4m. A further fall is threatened in the current period.

Serck employs £21.5m, or around 45 per cent, of its total operating capital in the valves sector; Pegler around 40 per cent. Convinced that the currently more stable gate valve market is already very well served and thus highly competitive, Serck is almost exclusively geared to the "boom and slump" steel valve industry.

Serck's involvement goes back to 1955, when as a manufacturer primarily of radiators, it acquired the privately-owned Audley Engineering valves concern which was already well established in Europe. Its Newport factory still provides the guts of Serck's steel valves manufacturing capacity.

In 1964 a marketing venture with Rockwell was started. The principal product was the lubricated plug valve, which remains Serck's major speciality with annual sales of around £20m. The butterfly valve market was developed during the last decade and Serck would claim a significant position here in the world market. Towards the end of the 1960s, the group also entered a joint venture with the Jamesbury Corporation of Massachusetts in the ball valve market.

Serck quickly bought out Jamesbury's stake and, in 1972, severed its connections with Rockwell and purchased Rockwell's plant outside the U.S. At that point, says the group's chief

executive, Mr. John Pinckard, Serck became a significant international company.

Turnover of both ball and butterfly steel valves is running at around £10m annually.

Mr. Pinckard sees the general industry or gate valve market increasingly in terms of a commodity business and is therefore determined to take Serck further into the more specialised highly engineered product range.

Unlike Pegler, which will not be tempted into the U.S. until "either they become more protectionist or we become less efficient," Serck is clearly very attracted by the North American market.

Mr. Pinckard is confident that the North American plug valve market has sufficient room for both Rockwell and Serck. The two groups are very close and the U.S. manufacturer is thought to have approached the Serck board with takeover proposals some seven years ago. However, no major rationalisation or merger moves are on the horizon.

Neither Serck nor Pegler foresees much new investment in the valves market. Pegler, Mr. Louden stresses, is more aware than in the past of the need to cut overseas markets and will be making a big export effort in, for example, South East Asia, where penetration is still relatively small. Around 70 per cent of Pegler's steel valves are already exported, however. The Pegler board has concluded that "within the next three-five years, the group must undertake a major investment to get off its present plateau—but it may not be in valves."

For all the apparent difficulties, there do seem to be areas of growth still capable of attracting new market entrants. Valve-makers Hopkinsons Holdings' 25 per cent interim pre-tax profit advance last year to £3.13m is an example of the long-term strength of the power generation industry, its major customer, at a time when the market for its "off the shelf" valves is being badly squeezed by competition.

With the important building sector beginning to stir once again, the bottom of the trough for the valve industry, if not yet reached, cannot be very far off. But nobody is even prepared to hazard a guess as to how well and how quickly the market can lift demand to meet supply. The industry will remain under a heavy cloud until that question can be answered.

## There's only one way to take Glenfiddich.

### Seriously.

You can take it straight.

Or with a little plain water.

But do remember that you're tasting no ordinary Scotch.

Glenfiddich is a pure, single malt. Distilled in the ancient way, in traditional handbeaten copper stills. The result is, perhaps the finest whisky the Highlands have to offer. Take it slowly. Take it seriously.

'Glenfiddich' in Gaelic means 'Valley of the Deer.'



## Take a ride on success. It's a continuing story.

The only meaningful compliment that matters to us is continued passenger support and patronage. In the last 5 years we have averaged an annual passenger growth of 30% as compared to 7% achieved by the airline industry.

A four-fold increase in passengers in 5 years on our network of 60 cities in 4 continents.

PIA is grateful for your patronage.

**PIA**  
Pakistan International

Great people to fly with.



## FINANCIAL TIMES SURVEY

Thursday, March 29 1979

هكلام من التهميل

## How chips are made

Max Wilkinson

A MODERN wonder of microelectronics is much easier to understand than most people think. The subject sometimes seems to be shrouded in mystery because the circuits are extremely small. The idea of a powerful computer the size of a soap-disk, a tea-leaf or a small seems well — just edible. So, most people think there.

However, for those with more curiosity, the starting point is that microelectronic circuits are really only small versions of big and clumsy animal. The earliest computers and receivers were relatively large, mainly because the people connected different components together with wires, nuts, and solder could not move their fingers round things smaller.

The earliest computers of about 1950, fairly thick, were used to carry pulses of electric current through a series of valves. The valves, the simple function of which was to pass or block the current in only one direction. Several were connected to form a "gate" which is the building block of all computers, large or small.

As the name implies, a gate is an electric pulse to pass or block the current. The gate can be opened or shut by a pulse which flips the gate by a separate wire. Thus, a gate has two wires going into it: one carries the pulse which is trying to pass through the gate and the other carries a pulse which flips the gate open or shut. Only one comes out of a gate. The

exit wire will only carry a pulse out of the gate if the entrance wire's pulse and the signal wire pulse to keep the gate open arrive at the same time.

In other words, if two pulses arrive at a gate together, one pulse comes out; but if only one pulse arrives at the gate nothing goes through. This is the basis of all digital computers. They consist of large numbers of gates connected together to perform the extremely simple form of arithmetic involved in adding two electric pulses together.

## Calculations

Computer arithmetic therefore takes this rather odd form: one pulse + one pulse = one pulse (1+1=1); and one pulse + no pulse = no pulse (1+0=0).

Luckily, this form of arithmetic can be used for binary addition and subtraction, which can be readily translated into the more familiar counting methods of the outside world. All calculations of all digital computers are accomplished by large numbers of these simple gates adding electric pulses at very high speed.

In the earliest days, the gates had to be the size of shoe boxes because they were made from the old vacuum tube valves which used to be found in radio sets. The computers consisted of three basic elements: a series of gates to perform the basic arithmetic or processing, an electronic store of pulses representing the data to be processed, and a store for pulses representing the programme which would open and shut the gates in the desired sequence.

## Microelectronics

Major investments in microelectronics are now planned in Europe, based mainly on American technology. But it remains to be seen whether a fragmented European effort can successfully challenge the industry's leaders in the U.S. and Japan.

● THE MOST remarkable new technology ever to confront mankind—that is the description of microelectronics by Sir Iwan Maddock, former chief scientist at the Department of Industry. Microelectronics, he believes, will prove to be more important than the inventions of the internal combustion engine, jet aircraft and even of nuclear power.

Why? Partly because of the astonishing reductions in cost, rapid technical advance, unprecedented reliability and the pervasiveness of its uses. But, perhaps most important of all is in what Sir Iwan calls the ability of microelectronics "to extend or even displace man's capacity for thinking, his intuition or his judgment."

This Financial Times survey—the first specifically devoted to microelectronics and the micro-computer—starts with the plain man's explanation of the basic technology: what it is, how the devices are made and how they were developed. In subsequent pages we discuss the implications of the technology, applications, different products and the structure of the microelectronics manufacturing industry.

range of commercial and government institutions which could never have afforded the old valve-driven monsters.

Transistors began to be made in large quantities on thin, salami-like wafers of silicon, sliced from the sausage-shaped crystal. Many identical transistors were made on the same wafer which were then cut up into small squares, each containing one transistor.

To achieve this, the wafer was first covered with a mask so that when it was put in the oven, only small pinheads of contamination were diffused into the silicon slice. Each pinhead was at the centre of a small square or "chip" which formed one transistor. The wafers had to be placed successively in different diffusion ovens with different contaminants to form the complete transistor. These transistors were then wired up (just as the old thermionic valves had been) to form gates.

In America, about 1968, in the

Bell laboratories, it was realised that by doubling the number of pinholes on the masks, two transistors (instead of one) could be diffused on each square or chip. The two transistors were then connected with fine lines of aluminium—sprayed onto the wafer through minute slots in another mask.

Within a couple of years, the techniques had been developed to the next logical step until about five interconnected transistors were placed on each chip to form a complete computer gate. The electronic components, which started as the size of a shoe box had been reduced to a small flake of silicon, about a quarter of an inch square.

The age of microelectronics had begun. One of the greatest difficulties was to make masks accurately enough, so that only the right parts of the silicon wafer would be doped with impurity when it was placed in the diffusion oven.

This problem was eventually solved by a photographic process. The wafers were coated with a sort of lacquer called "photo-resist" which can be washed away when exposed to ultra-violet light.

The masks were first drawn very accurately on transparent sheets the size of a kitchen table. They were then photographed and reduced to a slide the size of the silicon wafer. When ultraviolet light was shone through the slide onto the wafer, the required pattern of pinholes was burned into the photo-resist. When the wafer was placed in the diffusion oven, the gas would pass only through these pinholes to form the pattern of transistors.

Throughout the 1960s an enormous research effort was made in the U.S. to improve the purity of the silicon crystals and to increase the precision of mask-making. As a result, the number of transistors which could be placed on each chip doubled every year. At the same time engineers developed new types of patterns or "geometries" for their chips, to increase the packing density of transistors. Pinhole transistors began to merge and then to be replaced by a convoluted pattern of microscopic lines, each formed with a different type of impurity.

In 1972, Intel, the acknowledged leader in its field of semiconductor technology, was able to etch not merely a computer gate but the complete central processor of a computer on to a single chip of silicon. The first of these microprocessors were so-called "four bit" machines. That means they represented each character of

information by four pulses (or the absence of a pulse) of electricity. They were therefore relatively simple computers, suited to mechanistic applications such as controlling washing machines.

Now, Intel is producing its first 16 bit microprocessor, which has the power and speed of a modern mini-computer and out-performs the larger computers of the early 1960s. This device, which includes substantial memory is more properly called a microcomputer. Intel also pioneered the use of semiconductors for computer memories with an entirely new chip capable of storing 1,000 bits (or pulses of information), the 1k random access memory (RAM).

## Limits

Now, the leading companies are preparing to launch 64k RAMs which will inevitably be followed by chips with 128,000 cells and then 256,000. The limit of the present technology is thought to be about 10m elements per chip, the equivalent of the world's largest computer.

As each new step is made towards the goal of smallness, so technical demands also increase. For example, the smallest defects in the silicon crystal can upset the microscopic circuit elements. Minute quantities of dust in the fabrication process can cause whole batches to be defective. Masks have to be ever more precise and cleverly designed to prevent neighbouring circuit elements from interfering with each other. Manufacturers are constantly

striving to increase yields by reducing the number of defective chips which have to be thrown away. Each time the number of circuit elements is doubled, the yield is reduced. Then gradual refinements must be made until the yield is restored to nearly its previous level. This is why the cost of microelectronics, and therefore of computers, has been falling at such an astonishing rate. The cost of processing a wafer is roughly the same, whether it contains a large number of simple chips or a small number of very complex chips.

For this reason the advances in technology which make the big micro-processors and memories possible are constantly reducing the cost of the "simpler" circuits. Already, the simpler micro-processors can be bought for less than \$1. Once the masks and the design have been perfected, computers can be printed out like postage stamps. And during the next decade they will be.

The techniques used for computer circuits can be used for almost all types of electronic devices including radio and television. Although designs are different, the fabrication and the economics are basically similar.

All types of circuit have now been shrunk so small that engineers are reaching the theoretical limits of photolithography for masking the wafers. However, new techniques are being evolved to overcome the difficulties, including X-ray lithography and electron beams which draw circuits directly onto the silicon wafers. These developments, and the use of computers to help design chips, are discussed in the article on future technology on page xx).

Manufacturers are constantly

nology on page xx).

## Thinking for tomorrow got us where we are today

Today Cossor Electronics is a well established supplier of electronic equipment for the defence industry, public authorities and airlines.

Tomorrow we will be applying our technological skills to expand into many other fields.

Which is why we want to tell you something about ourselves. You may not be a customer today, but sooner or later you may be ordering an electronic system from us. Before you do, we are sure that you would like to know a little more about the company you will be dealing with.

We would also like qualified Electronics Engineers to realise just what Cossor Electronics has to offer. One thing is certain, our growth plans mean that we are going to need plenty of the right people to grow with us.



Cossor displays at Gatwick Airport.

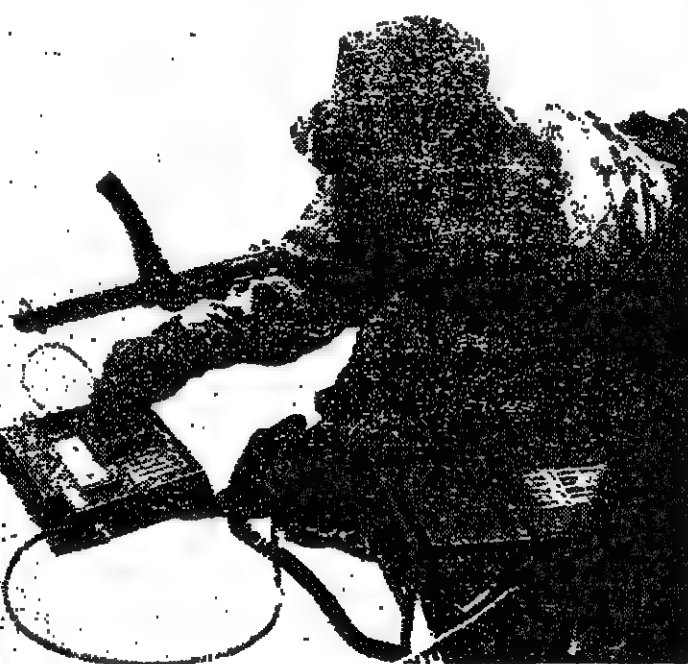
## Today's air traffic control...and the next generation

Cossor Electronics has been first in secondary radar since its development in the Second World War. Today our systems are used for air traffic control in airports and airfields throughout the world. We have the unique capability to supply both the airborne equipment (the transponders), and total ground systems (the antennae, interrogators, computer-based terminals and displays).

Our latest development project will affect anybody flying the crowded skies of the eighties. Known as Adsel, it is being designed for Britain's aviation authorities to give the controller the system he will need to cope with ever-increasing air traffic densities.

## When communication is vital, people keep in touch with Cossor

Our UHF/VHF ground-to-air communication systems are standard equipments for the Royal Air Force, and we have fitted them in many civilian airports here and overseas. We are producing a teleprinter for the British Army which has storage and extensive compose and edit facilities—more a fully fledged electronic terminal, in fact. We are developing tactical message terminals with storage facilities, which have any number of practical possibilities. Add to that modems, synthesizers, programmable filters and it is apparent that if you are interested in communications, we are the people to talk to.



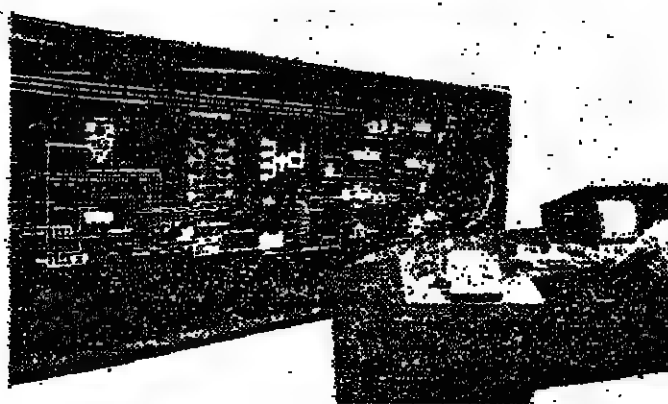
The Celtic tactical message terminal.

## Advanced telemetry for efficient energy management

Modern telemetry systems are playing an increasingly important role in the management of gas, water, oil and electricity distribution. Many other areas, where operational efficiency is increased by more accurate measurement and control, benefit from applying the same techniques.

These systems involve a wide range of electronics' skills. At Cossor we have been able to apply the broad based capability that we have gained in many fields of advanced technology to place ourselves in the forefront of telemetry systems development.

If you are an engineer interested in working in telemetry, or if you are planning to install, expand or replace a system—consult with Cossor.



Cossor telemetry at the Sutton District Water Company

## Airborne systems that make for safer skies

Today Cossor secondary radar transponders are fitted to most commercial aircraft in service with British airlines (including Cordero), to most Royal Air Force and Royal Navy aircraft, and to the aircraft of many overseas airlines. Our instrument landing systems are fitted by the Royal Air Force in the Jaguar, Phantom, Tomado and Hawk. As in all our product ranges, we are thinking for tomorrow. We are developing a single package microminiature transponder, known as the IFF 3100, to save weight and space in the British Tomado. Our engineers are also busy working on the IFF 3500, which is an airborne interrogator enabling an aircraft to identify another in flight and gain early warning of hostile attacks. Two multi-million pound Ministry of Defence contracts that mean we are playing our part in the defence of the country!



The Tomado

## Facts before your eyes -- and at your fingertips

The visual display unit is becoming as well known a piece of office equipment as the typewriter or telephone. What may be less well known is that Cossor Electronics is one of Europe's largest independent VDU manufacturers. Our equipments are mainly sold by our sister company, Data Logic, and through them our customers embrace nearly every level of industry and commerce.



The Raytheon PTS 100 VDU—made in Europe by Cossor

## Thinking for tomorrow means getting things right today

Radar, communications, telemetry, avionics, data—all important products performing essential services. Which is why we regard product reliability as essential, from the initial design, through to manufacture, test and quality control.

And it is also the reason why we have our own Service and Installation Division to ensure that the product performance lasts its lifetime.

At Cossor we care.

To find out more about us, please write for our brochure to:

Cossor Electronics Limited,  
The Pinnacles, Elizabeth Way,  
Harlow, Essex CM19 5BB England.  
Telephone: Harlow (0279) 26862

**COSSOR**  
electronics

Thinking for tomorrow

A Raytheon Company



## EVERYTHING POINTS TO STRATHCLYDE AS A MANUFACTURING BASE FOR THE ELECTRONICS INDUSTRY

Strathclyde is a first class base for the electronics industry. There are already a number of well-established companies in the region including major multi-nationals, manufacturing a diverse range of products from silicon chips to lasers.

There are good reasons for their expansion here. Proximity to the region's substantial sub contracting sector and some of the finest research establishments in the U.K. are just two. Of equal importance is the large throughput of highly qualified graduates from the universities and technical colleges in the region as well as a good supply of skilled labour suitable to the needs of the industry.

Financial incentives are good too. Strathclyde's special Development Area Status entitles incoming industry to maximum U.K. government assistance.

There is an ample supply of factories and sites and Strathclyde offers superb communications, not only with the rest of the U.K. but also with North America and Europe. If you would like to know more about the advantages Strathclyde can offer, fill in the coupon below.

Name .....  
Position .....  
Company .....  
Address .....

**Strathclyde  
Industrial  
Development**

21 Bothwell Street, Glasgow G2 6NJ  
Telephone: 041-221 4296

### Take it from the top...

Electronics Weekly is not only read at top level, it is written with top level authority, draws on top-level sources, and provides a full briefing on every factor important to senior management decision making, throughout the electronics and telecommunications fields.

New products in the pipeline, technical articles, company mergers and takeovers, government plans, legal and financial, export opportunities, Stock Exchange developments. Electronics Weekly gives a unique—and uniquely valuable—view from the top across all these areas.

A quality subscription journal—in fact, the only paid circulation newspaper in the UK electronics press—Electronics Weekly is essential reading for all senior management, and by the same token, the obvious medium for launching new products and selling overseas through its European edition.

For getting the facts from the top or taking them to the top, nothing can compare with Electronics Weekly. For subscription details, and a specimen copy or advertisement rates, contact Gordon Henderson on 01-261 8560 or write to him at the address below.

**Electronics Weekly**  
the top-level communicator.

Published by IPC Electrical-Electronic Press Ltd.  
Dorset House, Stamford Street, London SE1 9LU

A member of IPC Business Press Ltd.

## MICROELECTRONICS II

# A race to stay in the league table

EARLIER THIS month, Mr. Alan Williams, the Industry Minister, who has had most to do with Britain's attempts to enter the micro-electronic age, revealed a disturbing (to British business) set of figures. They showed the percentage of industrial components used in manufacture which were micro-electronic parts of one sort or another.

The U.S., not surprisingly, came top, with 24 per cent. Japan followed, at 15 per cent. West Germany came in at 14 per cent. Western Europe as a whole—not far behind Japan—was at around 13 per cent. But of that last total, Britain fell below the average, at between 10 and 12 per cent.

In short, Britain's manufacturers have been finding applications for micro-electronics at a significantly slower rate than its major industrial competitors. It is a measure of the strides taken in the past year that it is

now regarded as axiomatic that to lag behind in a league table like this one is a bad thing. Yet only a year ago there was little public discussion, either by Government or anyone else, on micro-electronic technology.

Precisely because the public "debate" has moved so rapidly, it is necessary to pose simple questions which have tended to be overlooked in the rush. The simple questions here are: why is it so important to find applications for micro-electronic devices? Why are there problems in doing so, and what are these problems?

### Complex

Why are micro-electronic applications important? Micro-processors combine increasingly high processing power—that is, they can control more and more complex functions—allied to a tiny size. Therefore they lend

themselves extremely well to a wide range of tasks which were previously (or still are) performed mechanically or electro-mechanically. The developments in equally tiny memories, which can now pack up to 64,000 bits or units on to a chip, further enhance and extend their use.

Because of this the two major areas of labour, the factory and the office, will see sweeping and progressive changes with, in factories, the introduction of micro-processor controlled machine tools and, in time, robots; and computer-linked word-processing systems now being introduced in offices.

At the same time, domestic tasks and leisure pursuits will also be invaded by the new technology, as consumer goods such as cookers, washing machines, refrigerators and indeed the home itself incorporate processors; while developments in the television set particularly presage a range of applications, from information bank to home computer and a variety of TV games.

So the chips are entering into both to what is made and into the process of making them at the same time. In the first case, it is becoming increasingly a fact that those products which do not incorporate micro-electronic technology will lose competitive edge and be seen as obsolete; while those production processes—whether for the production of paper (in offices) or of commodities—which have not taken advantage of processor-based strides in productivity will not be able to keep costs down and will tend to lose out in speed, too.

In short, unless an advanced trading economy applies micro-electronic technology, it will as a whole lag behind its competitors. It can be "side stepped" or "avoided" only at the cost of a substantial erosion in export markets.

Why are there problems, and what are they? First, European industry has been relatively slow off the mark. The U.S. space and defence programmes of the late 1950s, and early 1960s, coupled with the pioneering work of Bell Laboratories in transistor and semiconductor technology, gave the U.S. a technical base for new products. The private market, then, benefited from the state-funded programmes by developing a range of applications for the technology.

**Skill**

Japan, most alert of America's competitors, took advantage of those innovations, and immediately sought new commercial applications for them, which were then exploited by that country's characteristic skill in marketing and distribution.

Europe kept abreast of many of these developments, and indeed in the purely inventive sense, European scientists were well represented. But the companies failed, by and large, to take their inventions beyond specialised, often defence-related applications, though there were some abortive efforts to do so.

Now, faced with a make-or-buy rush into micro-electronics, many European companies are having to (a) licence the technology from the U.S. (largely or largely) or (b) buy into U.S. semiconductor and other electronic companies (c) entice these companies to set up over here. It also means that the governments of the major European countries are having to pump lots of money, fast, into training and industrial support.

This in turn means that much of the technology has to be transferred, resulting in as much as a two-year lag in certain sectors. It also means that there is a bottleneck of information and, increasingly, trained staff of all kinds essential to develop new applications, train yet more staff and introduce non-technical management and customers to the new technology.

John Lloyd

## Infinite number of applications

THE MICROPROCESSOR has attracted the most public attention recently, because of its very wide variety of potential applications.

The microprocessor is a standard component which can be mass-produced relatively cheaply, but it can be programmed for an infinite number of different applications, ranging from the controls of a washing machine or to a vehicle's carburation system or to an accounting machine.

The microprocessor can be produced cheaply because it can be manufactured in millions without it needing to be redesigned for each new application. A large part of the cost of each new application is therefore in the programming.

The microprocessor is, however, useless on its own. In any application it must be connected to an array of memory cells and also to special circuits which will translate the microprocessor pulses into a form which is useful in the outside world (input/output devices).

For example, a microprocessor controlling a washing machine will need to accept information about the water temperature which must be converted by a special circuit into the pulses understood by the micro. Its output will also

have to be converted from a stream of pulses into electric currents able to operate switches, for example, to turn water taps on and off.

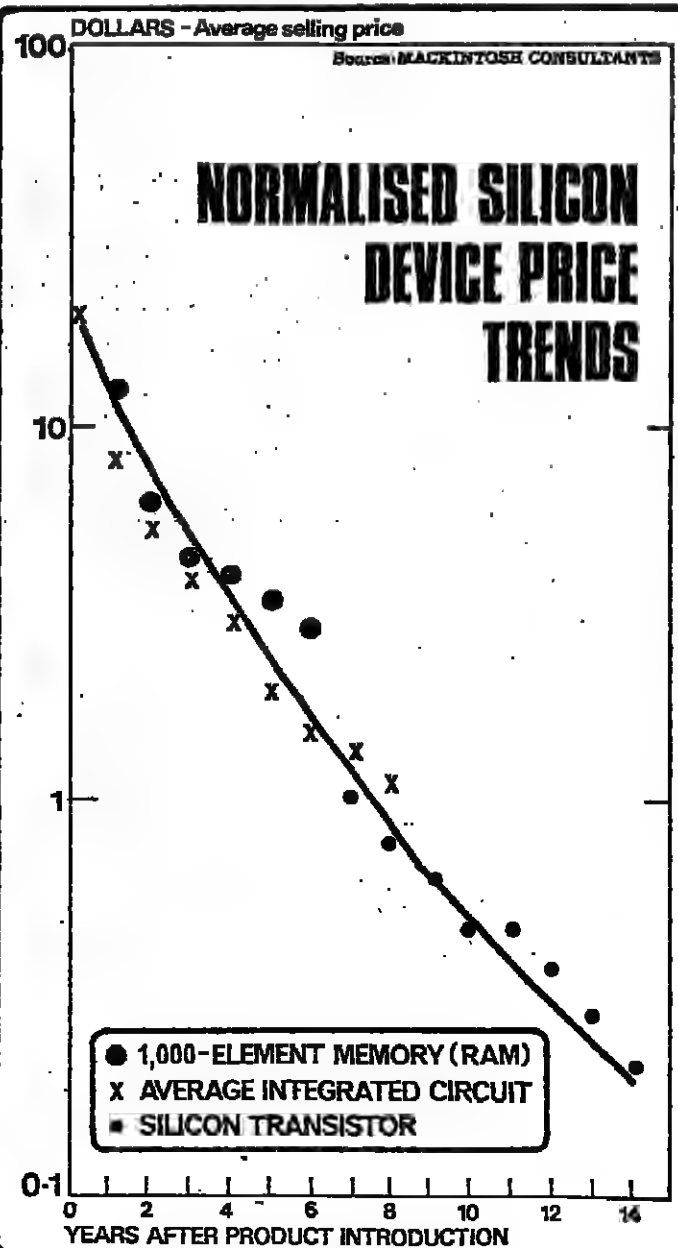
The special circuits need to be designed for a limited application and are often more expensive than the microprocessor itself, although Ferranti in the UK has developed a device called an "uncommitted" logic array which is claimed to cut design times to only a quarter for these special circuits.

Memory circuits, by contrast, are almost all mass-produced to a world standard. Read-only memories (ROMs) are used to carry programme data which cannot be altered once the micro is in service. Random access memories (RAMs) can store data which is constantly changing.

The microprocessor can fetch data from any cell in a RAM. But for bulk storage, serial memories, including the new bubble memories, are used. Data can only be retrieved from a serial memory in predetermined sequence, as from a magnetic tape.

In some applications, where very large numbers of chips are needed, it may be cheaper to develop a special circuit rather than use a microprocessor and its associated circuits.

Max Wilkinson



### A COMPLETE PACKAGE

—not just paperwork

We will design and build  
hardware and software

for your microprocessor application.  
Fast service using Computer Aided Design



Laser Scan Laboratories Ltd  
Cambridge Science Park  
Milton Road, Cambridge  
Tel Cambridge (0223) 88272

**inmos** the name  
for the future

Inmos Limited  
Whitfriars  
Levens Mead  
Bristol



# Changes in the function of chips

**NAKED** microprocessor is about as useful as a dead battery and, just like any other central processing unit, needs memory and support circuits to function properly.

Not many attempts have been made to differentiate between the processors themselves and their ancillary chips, possibly because of the speed of development which is leading designers to provide micros which incorporate some memory and control functions on one and the same piece of silicon.

Indeed, the single-chip processor with its own on-chip memory is seen as the product of the end of the microchip era. In the meantime, multi-chip and bit-chip micros are served by a multiplicity of other devices which it looks as if the ratio of processor value to support chip value is now in the region of 1:6 with single chip accounting for 6 per cent of a total market value of \$1.44bn in 1980, valued at \$60m by Macintosh Consultants.

The latter put the share of bit-chip products at 9 per cent that figure with PROM/ROM memories at 36 per cent, RAM at 17 per cent and other support circuits at 32 per cent.

In 1985, when market value of Western Europe has moved two and a half times to \$52m—while device shipments tripled to 25m—the picture will have changed considerably, as indicated above, single-chip devices will surge ahead to 15 per cent of the higher market value of \$72m against \$6m now.

Multichip will go to 16 per cent, PROM/ROM to 23 per cent, RAM to 9 per cent and support devices to 24 per cent.

In other words the processor/support and memory chip ratio will have altered drastically to around 9 to 11. But be that as it may, the memory market in the specific area of the micro will still be worth a hefty \$88m against \$50m in 1980.

## Trend

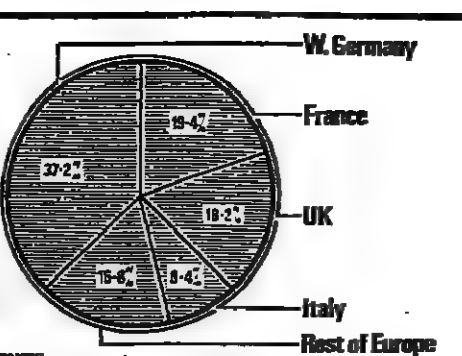
Underlining this trend is a statement made last year at a symposium in Anaheim by Dr. Federico Faggin, head of the Zilog Corp., who invented the first microprocessor in 1971/72 while he was working at Intel. Faggin saw very large scale integration (VLSI) with 5,000 or more logic gates per chip having a major impact on processor and memory capabilities. Cost per gate had decreased tenfold to about 0.3 cents since 1971 and the 10,000 gate device was a year away with 50,000 gates achievable by 1985—probably demanding a move to silicon-on-sapphire (SOS) technology because of the latter's much higher power dissipation.

Curious in the Macintosh projections is the relatively slow advance of the RAM from about \$18m in 1980 to \$24m in 1985. Yet there has been a great flurry of writing about 64K RAMs and the speed at which they will displace other smaller chips, including the standard 16K between now and 1980. This itself will be replaced by a unit of four times the capacity by

## Western Europe IC Markets

Breakdown by Country

1980 Total 1,140 \$m



The relatively high growth in France can be largely accounted for by a higher ratio of discrete to ICs than in West Germany or the UK prior to 1978. The increase in the rest of Europe between 1978 and 1980 is largely accounted for by IC requirements in the watch and clock industry.

1982, with a 1m bit RAM expected by 1985/6.

Many makers of general purpose machines, including ICL and Honeywell welcomed, of course, the appearance of the 16K devices and used them to win a small march over IBM when the latter was introducing new machines still using 1K banks.

Naturally, LSI and VLSI in bipolar or MOS are not the only memory and ancillary products serving the microprocessor though they are extremely fast with access/switching times measured in nanoseconds.

Also in the micro domain are the slower but considerably cheaper magnetic bubble memories and the charge-coupled device group.

Already manufacturers such as Rockwell are offering four-slice bubble memories representing 1m bits, and higher capacities per chip are predicted by it and by Texas, who was first into the market with bubbles and with equipment based on them.

Backers of CCD (charge-coupled devices) see on the horizon a hybrid RAM/CCD on a single chip to give lower

systems costs without a deterioration in performance, despite CCD's much slower access time of around 100 microseconds.

## Forecast

Motorola development specialists forecast an important intermediate storage rate for such devices, serving powerful micros, midway between fast LSI memory and mass storage—which could be one or other type of disc.

And there is also the Ebam-electron beam accessed memory—expected to hit the market in the early 1980s in which a tube of processed material one inch in diameter and two inches long can contain 1,000m bits of data which can be extracted by the beam in 80 microseconds for any location.

One factor which could have a marked influence on trend predictions is the degree to which circuit makers themselves pursue the production of virtually complete systems which only need to be connected to a power source and sensors to function in many roles.

Intel, for instance, very recently brought out what it said was the first industrial control system of its type—ICS-80. This system will take any of the company's single-

board micros within its signal conditioning and wire termination array, as well as any of the function expansion boards made by Intel and by 30 other manufacturers supporting the Intel Multibus design.

Intel obviously hopes for overkill and that the ICS-80 will become a de facto standard in the process control industry, in production automation, in data acquisition and in test devices.

But it is not alone in manufacturing such equipment since National Semiconductor almost simultaneously launched both a single card data acquisition system and a single chip eight-bit micro with a fair amount of memory on the same chip.

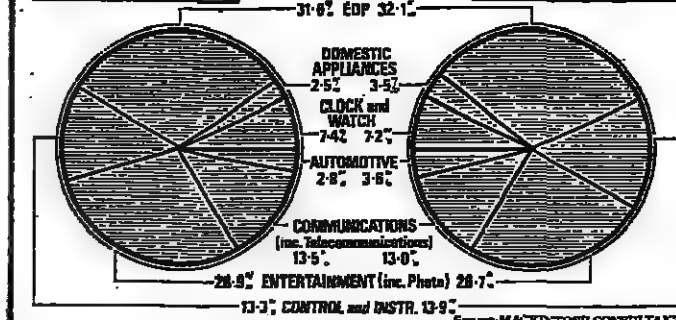
The data acquisition unit is on a Eurocard and provides 16 channels with 12-bit analogue to digital converter. On each signal conversion the RAM unit is given the result which it will feed out to the user within 220 nanoseconds of demand. Throughput is 8,000 channels a second, and the unit will work with "any of the popular computer systems."

To make the new one-chip, National has gone to a high density manufacturing technique XMOs. This has given it ability to provide 4K bytes of ROM and 256 bytes of RAM in the same chip and the claim is that INS8050 has double the capacity

## Western Europe IC Markets: Breakdown by Applications

1980 Total 1,140 \$m

1985 Total 2,224 \$m



While the EDP sector will still remain the largest, the newer applications in watches, clocks, domestic appliances and automotive products will together take nearly 15 per cent of the market by 1980.

of any comparable unit on the market.

It looks as if forecasters and specifiers are going to have a high old time over the next few years!

But meanwhile there is the floppy disc, without which the present upsurge in micro usage arguably would not have happened. And its application in micro systems and in peripherals is encouraging continued growth predictions of between 30 and 40 per cent annually until some time in the 1980s when solid state stores—bubbles or CID—start to dis-

place discs. Indeed, some solid-state devices already are on offer, but they are attacking a world market of around \$600m at the moment so would have to achieve universal acceptance very quickly to make a visible dent.

However, the ultimate goal for the designer of a complex entity such as a computer-based system must be to eliminate moving mechanical parts, if only for reliability's sake. Thus, the days of disc storage must be numbered, even if in thousands.

Ted Schoeters

## Innovators struggle to find uses

**E** FIRST application of a "integrated circuit to show such developments could come general was in an automatic washing machine.

Servis was the bold innovator, starting its initial development four years ago, with the aim of replacing the use of timers, relays, and controllers needed to operate the motor and heater in a modern programmed washing machine, a single electronic control.

The design task was not an easy one and there was very little precedent to go on. Final circuitry would have to be able to resist the steamy and sometimes corrosive atmospheres prevailing inside the cabinet—ne detergents contain more than a dash of bleach—and put with shocks that occur in the unbalanced equipment.

The chip also had to be isolated from the heavy current needed to drive the powerful motor and the whole array must be designed so that servicing, if necessary, would amount to a relatively simple replacement.

Servis management saw a reduction in the need for maintenance of the quite complex electro-mechanical equipment in quality automatic machine as a prime in a particularly tough market.

Their reasoning was that if visits to customers could cut by half or more the company would earn a great deal more, since to keep a big team of engineers on the road is a prohibitively expensive.

But behind this short-term motive was a much more far-reaching plan. Servis knew it was first in the field and that, in the ITT micro-electronics centre at Footscray, it had done an excellent job. The target is a washing machine control market for Europe, amounting to several million units a year.

## Extensive

Meanwhile, the development enabled Servis to produce extremely compact machines which do not perceptibly vibrate, even when operating on spin. True, it is expensive because the company has a large amount of research and development to pay off. But one of its tribulations is the recalcitrant washing machine and if it has tamed the beast to an extent that only one maintenance visit a year is required then some thanks are due to its electronic pioneers.

Since this early application of micro-electronic device was due to what is in effect process control, suggested uses have been thick and fast for this area, and it is clear that a high degree of over-enthusiasm carries with it certain dangers. There is little doubt that with a amount of over-selling now prevalent, micro-computers will be misapplied and some disillusionment creep in—not because of lack of reliability or performance but due to wrong uses of basic devices and to poor software.

In some areas of process control, the technology will have a hard task to gain a foothold, just as it took direct computer control of process plant at least ten years to gain acceptance.

To consider just one area of the process control industry, pneumatic controllers, it has to be remembered that up to 75 per cent of orders from instrumentation companies are for replacement and retrofit work or for customers who specify themselves what they require.

At the same time, pneumatics themselves have been given a boost by advances in associated instruments and tend to integrate well with electronics. So many designers and users, particularly in industries operating on hazardous products, will think long and hard before making radical changes in equipment that has served them well for several decades.

It must also be considered that overseas customers, particularly those in the Eastern bloc countries, do not like sudden swings in technology—not even in the size or material specifications in process vessels—particularly when the technology is one they are years away from being able to emulate. And that area is a good customer for British process plant.

As could be expected from the Servis work, engineers see the best outlet for micro-electronics in programmable controllers. World sales of these devices, which are in effect small local ganglions in a manufacturing plant's nervous system, are running at about £100m a year and have reached the very high growth rate of around 100 per cent.

The important part of any such controller can now be bought in the shape of a single silicon chip and it is obvious that here is a big micro-electronics growth area. If it is proved that a micro-controlled device applicable as a single-loop controller can be made as cheaply as the analogue version, progress will be rapid. For more complex units, it remains to be seen whether designers will opt for the potentially very high degree of reliability inherent in the ease with which redundancy and self-checking will be built into micro-based devices.

Telemetry is an area where micro-electronics are likely to expand quickly. Pioneering work is being done on military aircraft by Marconi to provide signal paths which are no longer lengths of wire or tubes carrying hydraulic fluids, but bundles of hair-fine glass fibres.

These fibre optic strands carry light signals and channels them along with no interference whatsoever and very little attenuation at each end. An opto-electronic unit emits a pulse of light as a relay opens or closes, or emits an electrical signal—to an instrument—as it senses a pulse of light.

Because the provision of many light fibre paths is a relatively simple matter, it is easy to see that control systems for aircraft and plant in hazardous areas can be made enormously more reliable.

Outlets for minute opto-

# Leaderchip!

Leaderchip means resources. Mullard's microelectronics resources include the UK's most comprehensive production facility, the massive European capability of Philips and the innovative ability of Signetics in the USA.

Leaderchip means quality too. Quality devices for everything electronic – from telecommunications to TV games. Right across the range there's Mullard quality setting industry standards.

In so many ways, microelectronics is at the very heart of today's industrial development. And Mullard Leaderchip is at the heart of microelectronics.



# Mullard



Mullard Limited, Mullard House, Torrington Place, London WC1E7HD. Telephone: 01-580 6633. Telex: 264341

Mullard manufacture and market electronic components under the Mullard, Philips and Signetics brands.

CONTINUED ON NEXT PAGE



## MICROELECTRONICS IV

## U.S. manufacturers lead the way



Perfectair are specialists in the provision of clean room facilities complete with all necessary support systems for the manufacture of microelectronic circuits.

## Perfectair Limited

ENVIRONMENTAL ENGINEERS

Ullswater Crescent, Coulsdon, Surrey, CR3 2HR.  
Telephone & Telegrams: 01-668 4561 (10 lines)  
Telex: 8811935 PERAIR



## The Beginning is Half of The Whole

Pythagoras-c500BC

...and it would be a good beginning with SCL.  
SCL have the Hardware Software & Government Authorisation to take your Company into the age of The Microprocessor  
SCL will give you many real benefits- PROFITABILITY from Flexibility and Higher Throughput  
Talk to Tony Roberts—TODAY

Street Consultants Laboratories Limited 0249-75-244

SCL

Kington Manor  
Kington, Shropshire  
CV35 9JH, UK  
Telephone 0549-75 244  
Telex 444275 MEXDES G

## MICROPROCESSOR TRAINING

"Bleasdale's courses—embody a sound and realistic approach to microprocessor training—they must be just about the best courses around"

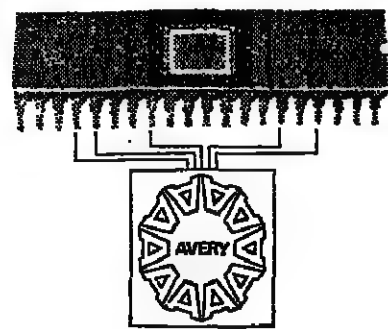
From a survey by Control and Instrumentation into microprocessor training

For further details contact—Course Registrar

**Bleasdale**  
Computer Systems Ltd

7 Church Path, Meriton Park, London SW19 Telephone: 01-540 8611

Some industries are thinking microprocessors. We are using them



There's a lot more to weighing than beams and levers. Look at the Avery 1750 in your local shop.

Deep inside the world's leading digital scale, there is a microprocessor carrying out all control and computing functions. Result: higher performance and reliability.

Microprocessors bring the same benefits to our electronic counting machines, weighing-in-motion schemes, weighbridge recording systems, and

fully automated industrial weighers. Load cells, solid-state physics, digitizers, and microcomputers have made weighing a high technology business. Big or small, in factory shop or process plant, our machines can be engineered to feed computers, control handling gear, accurate recorders, command remote displays... That's Avery technology at work.

Electronic Weighing Today  
is Avery Today

**AVERY**

W & T Avery Ltd, Smethwick, Warwick,  
West Midlands, B66 2LP, England Telephone: 021-558 1112 Telex: 339558  
A member of the Averys Limited Group of Companies

WORLDWIDE SALES of semiconductor devices in 1978 totalled \$7.6bn, of which about 58 per cent or \$4.4bn was integrated circuits. Dataquest, the U.S. analysts, are forecasting a rapid rise to \$12.7bn for the total semiconductor market in 1982 of which 66 per cent or \$8.4bn is expected to be integrated circuits.

During that period the fastest growing sector of the market is expected to be for Metal Oxide Silicon (MOS) devices, from which most microprocessors, microcomputers and expanding sector of computer memories are made. Sales of MOS devices are expected to double in the five-year period.

This market is served by manufacturers in three geographical groups and two main categories. The geographical groups are the U.S., Europe and Japan. At present the U.S. supplies about 63 per cent of the world's total of semi-conductors and probably more than 70 per cent of integrated circuits. The Japanese companies, stimulated by a \$1bn government investment programme, are currently the only serious contenders against U.S. dominance in the world market for standard integrated circuits.

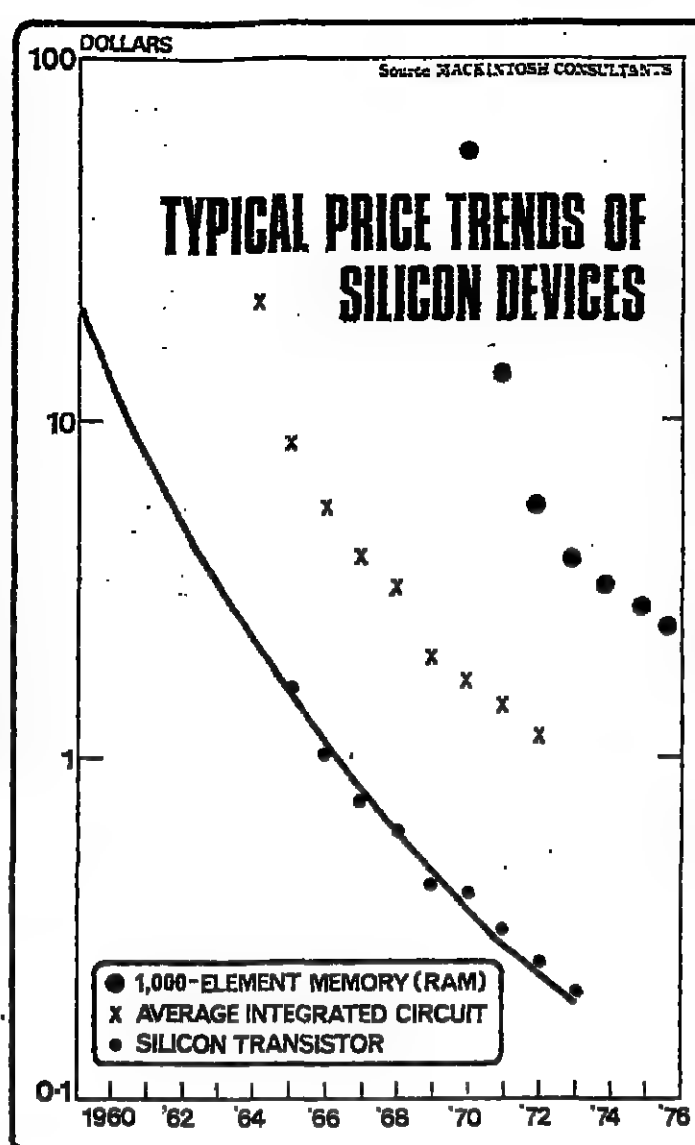
## Investment

A major investment is now planned in the UK, France and Germany over the next three to five years, but most of the technology for the new ventures will come from America through licensing, joint ventures, or in the case of the British Government's subsidiary INMOS, simply by buying key American personnel.

The semiconductor companies can be divided broadly into two further categories: the big league making mass-produced products including world standard computer memories and microprocessors, and the little league of companies with a much smaller operation which concentrates on trying to make high-value circuits for special and limited applications.

Until recently all the European semiconductor manufacturers except Philips and ITT have been in this second category. It includes the three British manufacturers, Plessey, Ferranti and the General Electric Company (GEC). Total semiconductor sales of these three companies in 1977-78 are estimated to be \$60m, only about 6 per cent of the semiconductor sales of the U.S. industry's leader, Texas Instruments. In the current year, Ferranti, probably the only profitable UK-owned manufacturer, is expected to sell about \$14m worth of integrated circuits from its British plant and a further \$10m through its newly acquired American subsidiary Inter-design.

This acquisition makes Ferranti the largest UK-owned manufacturer and with a return on capital well ahead of the



world-wide industry average, it is easily the most profitable. Plessey, whose integrated circuit turnover is estimated at \$18m in 1978, has been losing money and was last year looking for a purchaser. After abortive negotiations with both the National Enterprise Board and the GEC Plessey turned to America, but lengthy talks with General Instrument Microelectronics have so far borne no fruit.

Meanwhile GEC, whose integrated circuit turnover of \$5m in 1978 was negligible on the world scene, has formed a joint venture with Fairchild of Palo Alto, California, the fifth largest of the American integrated circuit manufacturers.

In France the largest integrated circuit (IC) manufacturer is Thomson CSF, through EFCIS, its joint venture with the Atomic Energy Authority. Thomson's IC sales last year are estimated at \$25m-\$30m on which it made a loss of about \$16m. This company has recently agreed to buy technology from Motorola, America's second largest semiconductor manufacturer.

In Germany the two manufacturers are AEG-Telefunken and Siemens, of which Siemens is the only serious contender

in the international market (for digital circuits). Its IC turnover last year was \$75m but it made \$265m of discrete semiconductor. AEG-Telefunken has concentrated on so-called linear circuits suited to applications like radio and TV.

Siemens is likely to receive the lion's share of the Federal Government's \$100m to \$120m subsidies for the development of very large integrated circuits planned over the next few years. Siemens has also gained access to U.S. technology through its 30 per cent stake in Advanced Micro Devices (AMD) of California, the tenth largest U.S. company in this field.

Recently, however, Siemens and AMD have ended their collaboration over the development of micro-computers. Siemens has taken a licence from Intel, while AMD in the U.S. has elected to hitch its fortunes to the designs of a smaller company, Zilog.

Early the largest of the European integrated circuit manufacturers is Dutch Philips, together with its U.S. subsidiary, Signetics. Philips itself is relatively strong in the production of linear circuits and discrete semiconductors, but the group has yet to make an im-

pact on the market for high technology digital circuits. Philips's IC turnover last year was about \$136m. Signetics is the sixth largest of the U.S. companies in integrated circuit production, with a turnover of \$200m in ICs. Philips's total semiconductor production including single transistors exceeds \$720m a year.

After Philips and level with Siemens comes ITT, an American-owned company which breaks with the usual pattern by having almost all its integrated circuit production in Europe. Footscray in Kent is the company's centre for MOS memory products, and ITT now rates second place in Europe for the sales of the industry's most advanced memory product, the 16,000-cell random access memory (16k RAM). It will soon go into production with the next step up in capacity—a 64k RAM. Its total IC production last year was about \$70m.

## Efficient

In Japan the four integrated circuit producers—Fujitsu, Hitachi, Nippon Electric and Nippon Telephone and Telegraph—must be considered in some sense as one, since they all co-operate in the government-subsidised research effort.

The Japanese have so far concentrated on supplying their own home market with only a limited incursion into American and European markets. However, in certain narrow but important sectors the Japanese have shown themselves to be efficient producers and aggressive in marketing. Some of their computer memory components have been acknowledged by U.S. competitors to show superior reliability, largely because of the exhaustive test cycles that they are put through.

In the U.S. the top six integrated circuit companies all now have IC sales of over \$200m.

Texas Instruments is the leader by a long way with 1978 IC sales of over \$660m, more than double the sales of its nearest rival, Motorola, which returned \$320m. Next comes National Semiconductor with \$330m and Intel with \$300m. All of Intel's products are in the high technology part of the industry. After Intel comes Fairchild with sales of \$273m in ICs and Signetics with \$250m.

Only three companies fall into the next bracket in the integrated circuit league. They are Advanced Micro Devices, RCA and Mostek, all with sales in the \$120m to \$130m range.

The third group comprises companies with about half the IC production of the second group. It includes ITT, General Instrument, Harris, Rockwell, Intersil and AMI. All fall into the range of \$80m to \$80m a year.

M.W.

## Innovators

CONTINUED FROM PREVIOUS PAGE

electronic devices including solid-state lasers will be extensive should the technique become generally used.

But in the process and plant control area, the one sector in which electronics must gain ground rapidly as plant comes up for renewal is in the design of control panels. Anyone who has walked round a big power station must have asked himself how any human being can keep track of all the dials and charts. Yet engineers began talking about ergonomic design of control centres at least 15 years ago.

Now, the visual display unit, which owes so much of its recent rapid improvement to micro-electronics, is capable with a single colour TV-type screen of replacing 45 feet of instrument panel. But that is because the VDU can operate dynamically to pinpoint any particular reading that demands urgent attention.

Many power stations have started to use such displays, with their control keyboards, to simplify the operators' tasks. Meanwhile, new contenders for the job of "instant" information presentation are appearing on the scene, including large liquid crystal displays and gas discharge panels which promise to be less fragile than the VDU in tough operating conditions. There are areas in process and manufacturing control where a great deal of research still has to be done. Particularly difficult is the technique of teaching a computer to recognise patterns or shapes. But this is a prerequisite for any satisfactory application of robot control to a production or assembly line.

TEB has been applying its not inconsiderable resources to automatic assembly and has succeeded in building equipment that will put together a number of quite intricate components at speeds many times faster than a skilled human can achieve—and go on doing this without a tea break or time off to go home. For the time being, however, the robot assembler needs a powerful control computer to run it plus the backup of a large processor costing about

\$2m to do the requisite software development. It could take quite a few years to compress all that into a few chips, so the appearance on the market of general-purpose robot assembly lines for any industry is unlikely before the turn of the century.

But IBM certainly intends to use robot assemblers in its own plants and many car makers, particularly in Japan, are using comparatively simple fetch-and-carry robots, each with its own micro-processor or analogous controller, to perform hard or dangerous tasks. So the bases for a considerable extension of automation at the very foundations of manufacturing already exist.

## Cameras

Borrowing from the bat, the latest camera in the Polaroid series finds the distance of its subject by emitting an ultrasonic "chirp" and measuring the time it takes for the echo to return.

Bats have been using this technique for, possibly, 100m years to avoid obstacles during nocturnal flying, but also to find their insect prey. And the succulent moths on which the bats feed have developed some interesting ultrasonic detection and avoidance procedures which help to keep an ecological balance.

The Polaroid range-finder uses a disc of a complex compound—usually lead zirconate titanate—which has the property that an applied voltage will produce a pulse of ultrasonics at a frequency far too high for human perception, and far higher than the bats' 18,000 to 20,000 cycles per second.

The trigger voltage is applied when the range-finding button is depressed. This action also sets off a timer under the control of a micro-electronic device, which counts the delay between emission and return of the echo time to give distance detector head.

Stored in memory is information such as the speed of sound and the characteristics of the

drive train which moves the lens system, and the control device integrates this data with the echo time to give distance and number of turns of the drive required to move the lenses to the correct position. And this is only a brief account of what happens within a few milliseconds of pressing the focus button.

At the same time, the controller is setting aperture for optimum conditions or flash and it is obvious that without some really advanced technology including micro-processing, the Polaroid could not work. Still on the leisure trail, micro-chips have found their way into TV games, about which many observers have mixed feelings. It all depends on what you call a game. Certainly the latest micro-chess players are well worth experimenting with, but they are not cheap and they have a certain lack of human warmth.

Games inventors are going to have to inject more than a dash of education into their products if the sector is to take off as the trade often has predicted. Indeed, it is the educational sector that is more likely to develop in a significant way, particularly to train and aid the severely handicapped and allow them to carry out useful work through novel means of communication. Latest in recent attempts to make communications easier for the speech handicapped is a unit called a "Slink" for speech link. It is a TV screen connected to a keyboard carrying 950 words which form a good basic speech vocabulary.

The user touches the required word and a micro-processor decodes the position in vertical and horizontal rows to determine the word to display on the screen. In this simple way, quite complex sentences can be built up very quickly. Extensions into the educational field are numerous and likely to be of much greater value than the TV game, which is a nine days' wonder and, after that, most probably, a great yawn.

Ted Schoeters

## Heraeus

## Silica and Metals

An unbeatable range of products for the Silicon and Microelectronics Industries

Heraeus supplies High Purity Silica and Metals

Manufacturing Process	SILICA
Production of polysilicon from chlorosilanes	In the form of Deposition Bell Jars
Growth of Single Crystal Silicon	Clear and Snowball Crucibles
Silicon Device Manufacture	Diffusion Tubes and Boats, Epi, LPCVD and Plasma Etch Reactor Vessels
Lithography	Photomasks for Deep UV and Electron Projection Masks
Sputtering	In the form of Precious and Exotic Metal Sputter Targets
Silicon Chip Assembly	Gold Bonding Wires, Lead Frames

Also  
For Optical Fibre Production: Fluosil Step and Graded Index Preforms, Heraeus WG Tubes, Suprasil, Heraeus Rods.

For Microswitch and Relay Production: Precious Metal Welding Tapes and Inlay Strip Material.

Heraeus Silica and Metals has two U.K. factories in Byfleet, Surrey, and East Kilbride, Scotland, and is part of the International Heraeus Group of Companies.

For further details contact:

Dr. J. L. Lambert

Heraeus Silica and Metals Ltd.

Oyster Lane, Byfleet, Surrey

Tel: 09323-49315

Telex: 928497

## In Clwyd today 127,000 people went to work as usual

And that must be a high consideration if you're in the electronics industry and looking closely at the UK for the ideal location for expansion.

Clwyd's multi-skilled 127,000 strong work-force has preserved quite a number of old-fashioned virtues such as such as a fair day's pay is a good return, for a fair day's work. Which is why Clwyd can justly lay claim to one of the best labour relations records in Britain today.

That's only one of the factors that convinced such diverse, internationally known organisations as ITT and BICC that Clwyd was the right place to invest. Among other factors are Clwyd's excellent communications—easy access to road, rail and air networks and proximity to the North Western seaports, readily available factory units or sites and extensive financial aid.

And one more of Clwyd's quaint old-fashioned virtues—it's an outstandingly pleasant place to live and work.

We know what the Electronics Industry—one of the fastest growing manufacturing sectors in the world—wants when it relocates.

So get the facts on Clwyd. Write to Wayne S. Morgan, County Industrial Officer, Clwyd County Council, Shire Hall, Mold, (Tel. Mold 2121) for a free colour brochure.



**CLWYD** — at the peak of Welsh potential

## datapod

for British Micro-based

P.O.S. Devices

Tel: 04862-69242



# The impact on industrial plans

VERISH ACTIVITY has been evident in the past year on the part of European governments which want to make up lost ground in the manufacture and utilisation of micro-electronics.

In Britain, two new committees have been formed to make semi-conductor chips. In France, three new projects have been announced which are intended to result in huge investments in new production plants. In Germany, Siemens and the Federal Government have contracted to invest substantially in research and capital expenditure intended to provide industrial strength in semi-conductor manufacture.

The first of the new projects to be announced last summer was the British National Enterprise Board's subsidiary, IOS, which has been allocated funds of £50m to attack mass market for standard micro-processors and memories. It was closely followed by announcement of a joint venture agreement between the Royal Electric Company and a subsidiary of California intended to establish a similar plant.

In France, the semi-conductor company EFCS, jointly owned by Thomson CSF and the Atomic Energy Authority, has agreed a technological agreement with Motorola for the development of a new plant. It is also being provided with a similar deal with Harris, the ambitions of all these ventures are realised, the extra production of semi-conductors in France and Britain by the late 1980s could amount to 100,000 and 150,000 units at present values.

Additional manufacturing capacity is also being provided by the major U.S. companies which have manufacturing subsidiaries in Britain: Motorola, National Semiconductor, Texas Instruments, and Mostek is also planning to set up a plant, either in Scotland or Ireland. It is also planning to increase capacity in Britain, which has been accompanied by a drive to stimulate awareness of the "micro-electronics revolution" and to encourage efforts to develop new applications for the devices. James Callaghan, Prime Minister, has stated that Government subsidies totalling about £100m could be made available in the next few years. These practical efforts have been accompanied by the publication of a series of reports on the industrial, strategic, and even the philosophical implications of this vigorous new technology. The first report in France, called "L'Informatisation de la société," is one example. The Advisory Council for Advanced Research and Development report to the Cabinet in Britain is another.

More recently, the U.S. consultants Arthur D. Little produced a huge report whose very title contains a new concept with astonishing implications. It was called: "The strategic impact of intelligent electronics in the U.S. and Western Europe 1977 to 1978."

## Baffling

The idea that electronics can be "intelligent" may sound baffling to the outsider, but it is now accepted as a commonplace by most people in the micro-electronics industry.

This fact, and its implications, partly accounts for the recent flurry of activity in Europe. If electronics are going to become intelligent, the argument runs, then the military as well as industrial strategy of developed countries demands that they should be able to manufacture the devices.

The intelligence of micro-electronics devices derives from the fact that they can be programmed to react in different ways to different stimuli, whether in controlling an industrial machine or in manipulating words and phrases in a text-editing terminal.

The capacity of micro-processors and memories is now becoming so great that the programming of even low-cost devices is becoming extremely complex. So although their intelligence is never creative or original it can certainly replace the work of clerks and skilled machine operators in a wide range of industries.

Until about two years ago it was widely believed in Europe that it would be possible to remain competitive by clever programming design of systems which would be assembled from equipment using standard U.S. or Japanese-made components.

However, that view is coming under increasing attack because of the rapid pace of development of micro-electronic circuits. Already about 200,000 separate components can be etched on to a single silicon chip. In five years' time it is expected that packing densities will have reached 5m compo-

nents per chip, while the design of these extremely complex circuits will have been speeded up with the aid of computers.

By this stage it will be possible to etch complete sub-systems of computers (or other devices) as well as large sections of the programme instructions on to a single chip. The design of the "intelligence" will then have passed to a large extent into the control of the semi-conductor manufacturers. Moreover, companies which do not have access to the technology of silicon chips may find it difficult to design competitive systems at all.

This probability explains why European governments are preparing to spend more than \$1bn over the next five years in developing integrated circuit manufacture with the help of American technology. It also explains why electronic systems companies such as GEC, Thomson CSF and Siemens are all now convinced of the need to take an active part in the semi-conductor industry.

The question remains, however, whether the new European companies and joint ventures can be successful in the highly-competitive world market against continuing pressure from the leading American companies and the newer challenge which is emerging from Japan.

To some extent the European companies will enjoy the protection of preferential purchasing, for example from telephone authorities which require special circuits in large volumes; from the automotive industry, which may have special large-volume requirements in Europe which are different from those in the U.S.; and from the television industry, where similar conditions apply.

M.W.

However, it must be said that the semi-conductor industry tends to place an inordinately high premium on mass production. If a circuit is required in large quantities of, say, 1m or more, the economics will be determined by the competition of the most efficient companies in the world. If smaller companies wish to make a living by making special circuits in low volume, they can do it only if they can justify charging a very much higher price than the going rate for mass-produced circuits.

## Tough

For these reasons many observers believe the going will be very tough for the European companies which try to break into the big league of mass production based on world sales. With government support, some of the new ventures will almost certainly succeed, or at any rate not altogether fail.

But even if markets for the new high technology products continue to expand at 20 to 30 per cent a year, it seems unlikely that all the present competitors can stay in the race. The main reason is that research costs and capital expenditures will continue to rise steeply as patterns etched on to the chips become ever smaller, with individual lines only one micron (a millionth of a metre) wide or less.

Sooner or later, therefore, it is likely that a shakeout will occur, as happened in the manufacture of mainframe computers and the large, successful companies will gobble up the smaller competitors. Whether the European ventures will be able to grow fast enough to survive this process, remains to be seen. Maybe some of them will.

# Competitors scramble to catch up

TWO YEARS or so ago, when the well-known software and systems independent group CAP—Computer Analysts and Programmers—decided to invest a great deal of money in equipment and methods for writing instructions sets for micro-processors, many people in the industry thought the senior partners were backing a certain loser.

CAP Microsoft, they said, was premature, would be addressing the wrong products because the industry was developing so fast, and that in any case it was doubtful whether microprocessors would have much impact on computing at any level, including that of the mini.

To the extent that replacing four boards in a mini by a single board with memory and controllers at a quarter the cost is no great event so far as total system cost is concerned, the critics were right. But since the micro can perform so many functions conferring a modicum of independence on visual display units, intelligent terminals, printers, etc., it is obvious that it has to affect the industry at all levels.

## Premature

Possibly Microsoft was premature and preached to the unconverted for a year before the upsurge of interest in the potential uses of microelectronics. But with their ability through the development of ingenious software, to simulate the working of practically any micro and convert the instructions derived during such exercises into operating routines which can be stored in compatible micro-memories, Microsoft and its emulators have secured an advance over other groups which are now frantically scrambling to make up for lost time.

Microprocessor software is not easy to write. In the period 1976-77 a number of instances came to light where time taken to program relatively simple equipment built around a micro was four to five times that which would have been needed to do the same task with a mini. But in several cases the latter solution was ruled out because of volume constraints, and the users had to put up with the fact that while equipment costs were declining, software costs were expanding at a very fast rate—which is fine on an open-

ended defence budget, but not so good in the hard world of commerce.

There is small wonder that would-be users are frequently warned not to expect an off-the-shelf "personal" computer to do payroll and stock control even for the smallest company. A machine can be bought for £500, and it is not a gimmick. But to do serious computing on a routine basis, handling all the figures that commercial practice and the Inland Revenue now demand, a would-be user should start to think around the £10,000 mark, a good part of which represents systems and applications software.

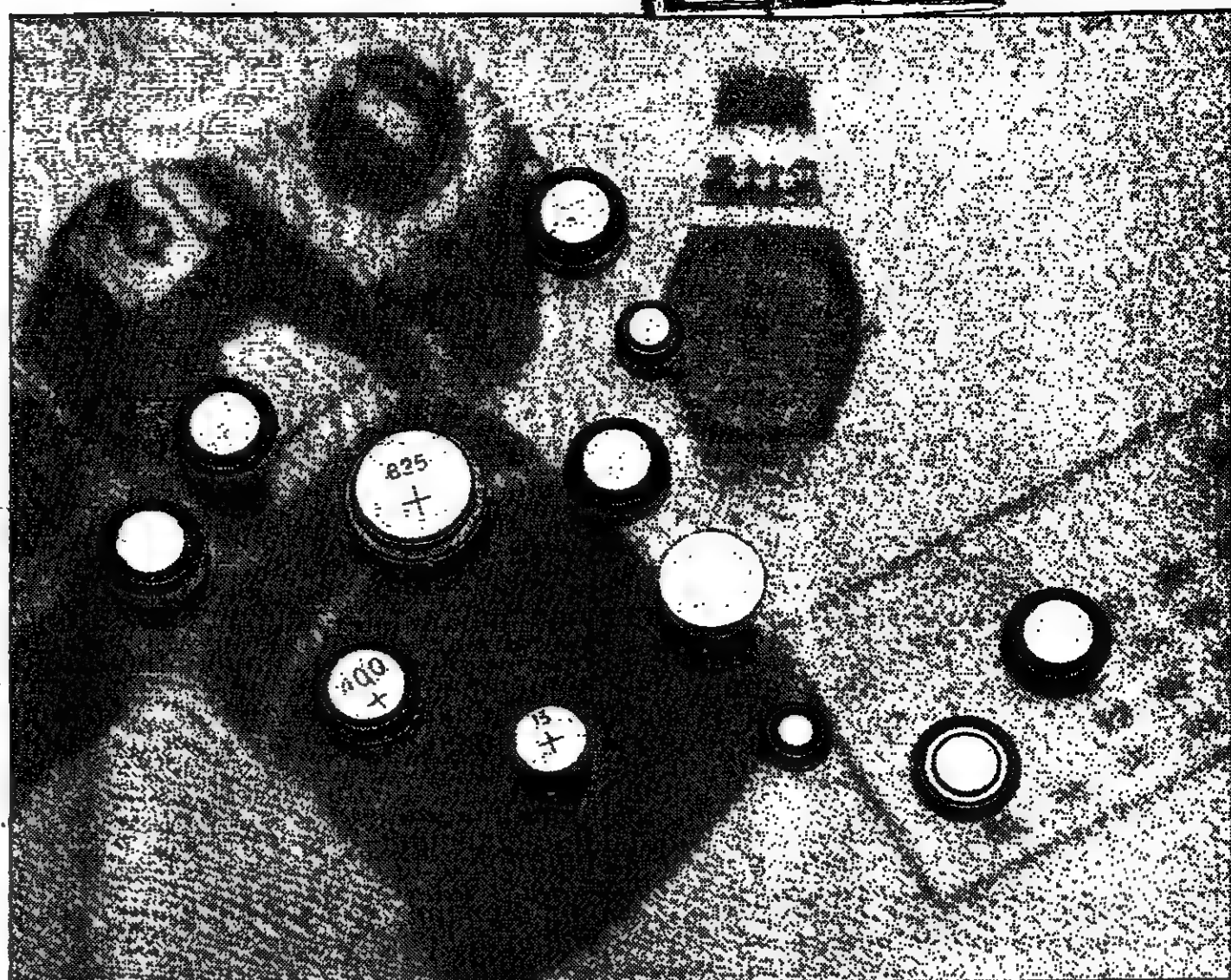
Indeed the resentment between established makers of small business computers and the entrepreneurs now pushing into that market with micro-based products is coming to a head precisely over this point of the provision of adequate software and the continued support of it by the supplier.

Announcing a further investment in library software programs for its business systems recently, Philips Data Systems made it known that in its opinion smaller companies were not offering the support a first-time user needed and "represent a far greater risk for the buyer."

The investment decided on amounts to £2.5m and it will go towards expanding the routines available as part of the total package with the various machines supported by Philips and offered in what one might call a "bundled deal." Philips will write special routines if users insist but the company generally prefers to supply software, it knows from experience, will create no problems.

This question of responsibility and standards has been exercising the National Computing Centre for some time and more particularly since it became clear that any electronic engineer with up-to-date microchip and peripheral catalogues and a soldering iron can put together a working "business system" in a very few hours.

This would include display and keyboard, driven chip, discs and a printer. So one must immediately ask who is responsible if the printer stops working, or the floppy disc drive collapses or the display goes down. The small entrepreneurial company is unlikely



Silver button batteries produced for world-wide sale at Berec (Micro Batteries) Limited, Banbury, England.

# Our Micro Power

As revolutionary developments take place, for example in the field of electronic microprocessors using silicon chips, a whole new generation of battery using devices, each with its own special portable energy requirement, is being produced.

The Berec Group, Europe's leader in portable energy, is already producing batteries to meet these requirements, and the advanced projects group is tasked to investigate applications and systems for the future.



**Berec Group Limited**  
Developing the future in portable energy.  
Formerly Ever Ready Company (Holdings) Limited.

# The five dumbest products in the world.

There they sit. Five products with no intelligence whatever. And you can't blame the people who made them. Because until now, nobody had the technology to make these products actually think. So we've had cars that can only respond to their drivers' commands, while they charge inefficiently on.

Homes that know only if it's too hot or too cold, while all hell breaks loose outside. TV sets that can only reproduce what the station tells them to reproduce.

Telephones that can only send your voice from point A to point B.

And toasters that can't tell the difference between a crumpet and brown bread.

The fact is, these products haven't really changed in more than 20 years.

But what if there were a miniature computer that could make them think? A little brain that could make them sense a situation, make a decision, and do something about it?

Hidden in the air filter of your car, this computer could adjust your car's engine mixture to compensate for changes in temperature, humidity, air pressure and fuel volatility. To give you optimum petrol consumption and minimum pollution anywhere, anytime.

Recessed in a wall of your home, it could do the obvious things like control temperature, humidity, and air purity. But it could also water



the lawn, warn of fire, scare intruders, turn off the lights, and calculate the family budget.

Inside your TV set, it could turn on your favourite programmes automatically, serenade you with music when the commercials come on, read bedtime stories to the kids, and do your income tax.

Concealed in your telephone, it could call the fire brigade automatically, time your calls, restock your larder, start the coffee, mix your drinks.

And in your toaster, it could create the impossible: a perfect piece of toast.

What if?

Well, it's not a "what if," it's here now.

In a miniature computer no bigger than a packet of cigarettes.

It's called a microprocessor, and it is currently selling for only a few pounds.

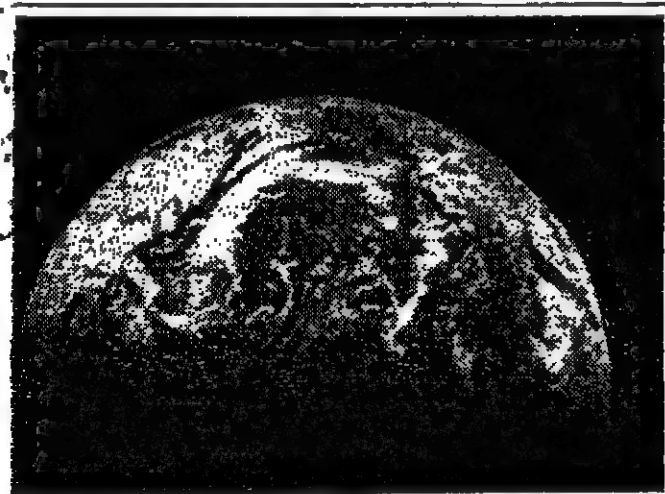
It's already been ordered by hundreds of manufacturers.

Including people who make appliances, automotive equipment, and TV sets.

So it looks like some of the products on this page won't be dumb for long.

With National, perhaps your product will disappear from this ad sooner than you think.

**National Semiconductor**  
Making technology work.  
301 Harpur Centre,  
Horne Lane, Bedford MK40 1TR  
Tel: Bedford (0234) 47147 Telex: 826209



## Microprocessors... the future is already here with Cramer.

Cramer is your total high technology source. Look to our experience, for more than 4 years we have been supplying microprocessor teaching and development systems to industry, education and government offices—answering to your needs. Based in London, our microprocessor centre is able to supply a growing list of products off-the-shelf quickly and efficiently.

**cramer ELECTRONICS**  
Cramer Components Limited, Hawke House, Green Street, Sunbury-on-Thames, Middlesex. Tel: 01-979 7799. Telex: 923592.

**UMRCS**  
UNIVERSITY OF MANCHESTER  
RESEARCH CONSULTANCY SERVICE

## MICRO-ELECTRONICS

Highly qualified and experienced staff  
A wide range of specialised equipment  
Comprehensively equipped laboratory workshops

For advice and assistance on  
Hardware and Software Consultancy and  
Longer Term Research and Development

Registered MAPCON consultant

Contact UMRCS  
The University  
Manchester M13 9PL  
Telephone  
061 273 3333  
ext 3219 or 3206



## We have the big ideas in microelectronics

There's been a lot of talk recently about the microelectronics revolution. But have you thought about its impact on your industry? Or what benefits it could bring to your product? Benefits such as reduced costs, improved efficiency and reliability, and its ability not only to do more things—but to do them better. You can be sure your competitors—particularly those overseas—are not going to be slow to exploit its potential.

At Racal, we're not just talking about it—we're doing something. In line with our proven philosophy of applying advanced technology to our successful range of products, we've built-up a unique capability in custom-designed THICK-FILM HYBRID modules, large-scale integration (LSI), and developed new Uncommitted Logic Array (ULA) techniques, which we believe are ahead of any in the world. These new techniques reduce LSI chip design to less than three months.

And we've got a lot of big ideas about how this technology can benefit all branches of industry—from machine tools to domestic appliances, from toys to automobiles.

You should be talking about microelectronics.

Talking to us.

Because we've got the big ideas.

Racal Microelectronic Systems Limited  
Barnet Road  
Reading  
Berkshire RG2 0PZ  
Tel: Reading (0734) 864611

**RACAL**

Infotech State of the Art Conference  
London 21-23 May 1979

## MICRO-ELECTRONICS & DATA PROCESSING THE NEXT 5 YEARS

This major international Conference has been designed in close co-operation with leading semiconductor and computer manufacturers. It provides a unique high-level forum for technological and market issues with speakers from Europe, USA and Japan.

Don't miss this opportunity to hear the policies, plans and predictions of the microelectronics and data processing industries.

Details from: Special Events  
Infotech International Limited  
Nicholson House  
Maidenhead, Berks  
Telephone 0628 35031

State of the Art Tutorial  
Future Systems  
Architecture  
24-25 May

## Software Sciences— making micros work for you

No other independent supplier can match Software Sciences' resources for the effective application of microprocessors.

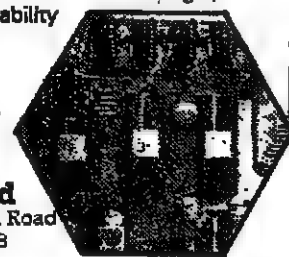
● 800 micro-based systems installed give us unrivalled experience in applications ranging from point-of-sale and currency exchange to front-end intelligence and stock recording.

● As UK and Benelux distributors for the Boston Systems Office range of products, we can provide powerful, versatile, multi-user development systems for all commercially available microprocessors.

● Our specialist subsidiary, Software Sciences Micrologic, provides a total design and build capability for microprocessor-based systems.

Whatever your application interest, contact Software Sciences to find out how we can help.

Software Sciences Limited  
Abbey House 282/283 Farnborough Road  
Farnborough Hampshire GU14 7NB  
Telephone 0252 44331



## MICROELECTRONICS VI

# Important debate on industry's future

THE BIG strides made by semiconductor technology over the past 30 years, and more especially in the past 10 years, have bred a belief that further, rapid innovation can be infinite. It will not be.

Many manufacturers now reckon that the late 1980s or early 1990s will see the effective limits being reached in much micro-processor and memory development, though there will be other breakthroughs to be made elsewhere.

It is now generally agreed in the industry that leading companies will be able to construct memory devices with 1m components on them by the mid-1980s (though there is some debate about whether or not there will be a market for them).

By that time, too, 32- or even 64-bit micro-processors may be in service. Whether that will mark a pause in the development of the technology is impossible to say, though some experts believe it will, and that semi-conductor invention will branch out into opto-electronics (a development already healthily under way) and other avenues at present barely explored.

One reason for believing that there is an effective end in sight is that the production technology will have effective limits. At present, most chips are made with optical masks, which can give feature sizes of down to four microns, or thousands of a millimetre.

However, so-called projection aligners are now available which can give widths of three or even two microns, while it is possible to have—on high cost—advanced electron or E-beam machines which can yield widths of one micron or less. X-ray techniques also carry the engineer down to these unimaginably narrow widths. Progress beyond that will be in fractions of microns.

## Technique

A necessarily simplified description gives an impression of the difference in the techniques. Using optical masks, the pattern of the chip is made on a large photographic plate, then progressively reduced on two different cameras, and then replicated on masks 200 to 300 times over.

Each reduction process, especially the last, is a potential source of errors, largely because the wavelengths are comparatively long. Using electron beams, with much shorter wavelengths, and drawing patterns directly on to the masks, components of one micron or less can be accurately reproduced.

The technique has its drawbacks: it is very expensive, and many times slower than optical processes; and it is quite possible that E-beam machines will be used in semi-conductor houses in conjunction with optical processes—the E-beam making the masks, and optical and X-ray processes replicating the chips from these masks.

If there are limits to the production technology, it seems that there are few limits to the applications to which chips will be put in the future. Indeed, one manufacturer (General Electric of the U.S.) claimed recently that we were still standing on the threshold of micro-electronic developments worldwide, and that every conceivable area of human work and leisure would undergo major—and of course beneficial—change because of it.

The following list is far from exhaustive, being confined mainly to new or relatively new

market segments worldwide (the list is largely based on Fairchild Camera estimates).

In car, truck and bus production, micro-electronic technology accounted for \$115m in 1973, and is targeted to rise to \$780m in 1982—a seven-fold increase (see graph).

In the pocket calculator market, it is thought that \$150m-worth of semi-conductors will be used annually in each year to 1982. Digital watches are forecast to use \$60m-worth of chips each year in 1982. The worldwide stereo market for semi-conductors is expected to grow from \$385m in 1976 to \$708m in 1982.

In two smaller markets, semi-conductors in microwave ovens will grow from a value of \$2.6m in 1976 to \$17.6m in 1982; and in the telephone handset chips will grow from \$2.4m in 1979 to \$10m in 1982. However, there will be a much larger take-up in worldwide telecommunications networks, in exchanges and in other peripheral equipment.

In the mini-computer market, the figures are much larger: the market should rise from \$26m in 1970 to \$1.1bn in 1982. Single-chip micro-processors will be selling \$122m in 1982 compared to \$26m in 1977, while board system micro-computers will be at \$285m in 1982, up from \$37m in 1976. Finally, intelligent terminals should take \$204m-worth of chips in 1982 against \$57m in 1976.

This list greatly underestimates developments. In many of the "old-fashioned" technologies, growth in micro-electronics, paradoxically, will be even greater. Defence (which can be given the credit for pioneering development in the field) will become increasingly dependent on micro-electronic technology, especially in signalling and in range-finding; while medical equipment is now a comparatively large user of chips and will become a much bigger one.

The list further extends into domestic appliances such as cookers, washing machines and refrigerators, then loops back into the traditional market of large computers and extends on into various forms of process control in manufacturing, together with stock-control systems and diagnostic devices.

What will the micro-electronics industry itself be like in the future? This question naturally exercises its executives and workers, and there is currently a fascinating debate going on within the industry on two quite separate, but not necessarily mutually exclusive, strategies for semi-conductor companies going into the 1980s.

The debate found public forum in the recent Financial Times/Mackintosh Consultants conference, "Tomorrow in World Electronics," when the protagonists were Dr. Richard Petritz, managing director of Immos, and Dr. Lester Hogan, vice-chairman of Fairchild—competitors in both the U.S. and the UK.

The argument therefore was far from an academic one and it is one being waged throughout the industry on its outcome, the shape of the industry and the companies in it will depend.

On one side, the argument runs like this. For the past ten years, the semi-conductor companies have been "manufacture-orientated"—or, as Dr. Hogan



The "Zapper"—a laser mask eraser—is one of the rigid quality control checks used by the Siliconix group in its mask-making process. Integrated circuits represent more than half of Siliconix's sales; these devices include analog switches, analog/digital converters, telecommunication ICs and timing devices.

put it, "technology driven." That is, they were most concerned to invent and innovate, bringing on to the market the latest brainchildren of their designers and allowing the customers to come to them.

There always seemed to be a market for the products, and so the companies' designers simply continued to reach greater and greater levels of sophistication. However, the sophistication is now becoming so great that the next generation of chips, or the next after that, will meet almost any conceivable systems requirement. The effort no longer will be directed at invention, but at systems design and the marketing of products. The companies must begin to find out what the customer wants.

As Dr. Hogan put it: "The volume production will no longer go to the world's most complex chip. The volume production will go to the chip that reduces the total systems cost the most."

That in turn will dictate a profound change in company structure. The high-volume semi-conductor production houses will be the dinosaurs of the late 1980s. Instead, vertically-integrated electronics companies will become the order of the day.

Dr. Hogan said: "In many cases large systems will require a large number of different chips but a small quantity of certain ones. The manufacturing process must change dramatically, and it will be extremely difficult for present-day manufacturers to maintain the present-day structure of the industry."

"Vertical integration from component design through system manufacture and sale appears to be the prime requisite."

The opposing argument runs: cost has always been the prime consideration of the semi-conductor business, where the regular practice is forward pricing—quoting delivery

prices for, say, six months in the future which are below present production costs. This process can be reasonably expected to continue.

In practice, that means that the large users will seek ways of sourcing their chips at the lowest possible cost. In-house manufacture of the kind proposed by Dr. Hogan, where a vertically integrated company makes small batches, will never have the price edge over high-volume houses making multi-application processors, memories and micro-computers.

Dr. Petritz, whose company, Immos, to a large extent depends on his hunch coming off, argued that even those companies, like IBM, which presently produce chips in-house for their own use will be forced on to the open market for their chips purely because of the competitive pressures of price. Indeed, Dr. Petritz cited the recent purchase by IBM of batches of Intel chips as one such straw in the wind.

So, the lines are drawn: vertical integration versus mass production. Both sides are certain of the correctness of their analysis. Dr. Hogan: "Personally, I believe that 10 years from today there will be no large pure semi-conductor companies surviving." Said Dr. Petritz: "I will bet that ten years from now IBM will be buying in all but its most specialised chips."

Though theoretically, the strategies are not mutually exclusive in practical terms, Dr. Petritz could be right in the immediate future and then when Dr. Hogan begins to be right, Immos and any other "pure" semi-conductor manufacturers could be absorbed into a vertically integrated company to the probable profit of both.

We shall have to wait a decade to know the result whether one or other is right, both, or neither.

John Lloyd

## Competitors

CONTINUED FROM PREVIOUS PAGE

to have much pull with a supplier, low-cost hardware, particularly if the latter is situated on the U.S. West Coast. So "cheapest" in this sense could be very far from best.

But at the same time, one could ask the question "What is a business system?" Texas Instruments, which claims with some justification to be the world leader in advanced micro-electronic memory products, has brought out very recently a business decisions package which takes the form of software stored in a memory that can be plugged into a number of the company's programmable calculators.

It contains 11 programs including a self-check routine but also procedures for long-term financing, debt financing, investment evaluation, re-order timing, etc.—all routines which would normally need the services of a relatively large computer and expert staff to set up and run. But Texas is supplying this particular business decisions module for \$32. A small printer can be coupled to the calculator.

Shall we then see, in the next five years or so, an industry developing in such a way that, besides being able to walk into the High Street computer shop and buy the components for a system of his choice, a user will be able to select off-the-shelf all the plug-in software routines required to run the computer and its peripherals and do all

the tasks specified on the wrappers?

Perhaps not in five years, but certainly in 10 since Texas is not the only circuit manufacturer working towards this end. Indeed if the cost of processing and memory devices continues to drop as it has it is hard to see where else makers will go, and that is where National Semiconductor as well as Texas is aiming.

## Prospects

Looking up-scale from the area now served mainly by the small mini, one can see a large area of computing open to an ingenious use of multiple micro-processors harnessed to a common task. Several attempts have been made in the past five years to do just that but apart from initial claims of "power" from a handful of micros, very little more has been heard.

With Pulsar, however, Digital Equipment Corp. is making a serious attempt to provide a commercial unit based on up to 16 of its own LSI-11 micros and has demonstrated processing power in real-time work some 50 per cent better than that of the PDP-11/70, DEC's most powerful mini. But the software tells the user that Pulsar is a single standard DEC mini.

In Britain, National Physical Laboratory and Seicon are using a "ring" of Ferranti Argus

700F computers in the Demos project which may result in an extremely powerful machine with unmatched ability to recover from the failure of one or more component computers.

UMIST, rapidly assuming a European lead in research on what can be done with micro-processors, has set up MAU—Microprocessor Applications Unit—to study such structures as Cyba-M which is also an array of 16 micros. MAU has experience of many microprocessor devices and with its 30 experts in the area is offering training and a technology transfer service from the laboratory to the production floor.

At the apex of microprocessor applications is the distributed array processor (DAP), with which ICL in Britain appears to have won a world lead despite very belated and grudging official support.

This machine, which at the moment requires a large computer to control it, has an array of 64 x 64 simple but very fast processors each with its own memory store. It will carry out the same operation simultaneously in all the elements of the array and will become invaluable in working on many groups of data like those which occur in weather forecasting and the modelling of such global operations as those of the big petroleum companies, apart from its obvious military potential.

Ted Schoeters

## EQUITY CAPITAL FOR EXPANSION

Abingworth seeks investment opportunities in the £100,000-£400,000 range in profitable companies in growth areas. Particular emphasis placed on proven management.

Abingworth

Limited

26 St. James's Street, London SW1A 1HA.  
Telephone No. 01-839 8745

## UMIST

The University of Manchester  
Institute of Science & Technology  
MICROELECTRONICS APPLICATIONS UNIT  
(MAU)

The MAU provides the link between industry and the highly successful Microprocessor Engineering Unit, formed two years ago and now the largest independent unit of its kind in Europe.

- The MAU:
- ★ gives engineering retraining courses from a 3-day introductory level through to advanced 3-week modules;
  - ★ gives consultations to industry on all aspects of microprocessor implementation in products and processes (under the MAPCON scheme);
  - ★ gives "awareness" sessions to non-technical managers from all sectors of industry and commerce;
  - ★ carries out development contracts incorporating microprocessors.

All these activities draw upon the wide range of disciplines and expertise available at UMIST.

In the immediate future:

## "MICROPROCESSORS—APPLICATIONS AND IMPLICATIONS"

A one-day conference at UMIST on Tuesday, April 3rd, 1979. Speakers from UMIST, industry, Department of Industry and Trade Unions.

Conference fee: £25

## 3-DAY ENGINEERING COURSES ON MICROPROCESSORS

April 18-20, May 9-11, July 2-4, September 17-19, October 22-24, November 5-7, 1979.

Fee: £170. 10% reduction for block bookings of 10 or more

Details from:

The Registrar, UMIST, P.O. Box 88, Manchester M60 1QD.  
Tel: 061-275 3311, Ext. 2753.

## CTC Translating problems into solutions

At Chemical and Thermal Controls we specialise in the application of modern control technology for both new and existing plants. Translating your problems into highly technical electronic solutions to improve quality and reliability, provide information and save money is where our experience lies. Selecting the most cost effective hardware for any application CTC handle the complete project from discussion to commissioning and maintenance and have the backing of the substantial Hunt & Moscrop Group. Solve your problems now by phoning Richard Burton on Wilmslow (0625) 532451.

Chemical and Thermal Controls  
Brook House, Church Street, Wilmslow  
Tel: 0625 532451  
A member of the Hunt & Moscrop Group

A computer; actual size.

**We started it all.**

FAIRCHILD CAMERA & INSTRUMENT (UK) LTD.  
230 HIGH STREET, POTTERS BAR, HERTS.  
EN6 5BU. TELEPHONE (0707) 51111. TELEX 262835

## F INTERNATIONAL LIMITED

For countrywide design  
and programming services  
call us at:

F INTERNATIONAL LIMITED.  
The Bury, Church Street, Chesham  
Buckinghamshire HP5 1LB

CHESHAM (02405) 4999

## WORD PROCESSING the Logica way

Unicom VTS

The shared logic range;  
over 350 typing screens  
installed — 55% of UK market

VTS 100

The new stand-alone  
range; includes office  
and scientific models.

Logica VTS

Logica VTS Limited  
86 Newman Street  
London W1A 4SE  
01-637 9111







## Companies and Markets

## LONDON STOCK EXCHANGE

## Eleventh-hour censure nervousness causes markets to lose impetus in busiest session for two years

## Account Dealing Dates

\*First Declared Last Account  
Dealings Dates Day  
Mar. 22 Mar. 22 Mar. 23 Apr. 3  
Mar. 26 Apr. 5 Apr. 6 Apr. 18  
Apr. 9 Apr. 19 Apr. 20 May 1  
\*New time dealings may take  
place from 9.30 am to 10.00 am

Stock markets yesterday experienced their busiest trade for two years, as measured by official markings of 9,554, with institutional and public investors continuing to concentrate on the possibility of a change of Government within the next couple of months.

Renewed strength in the market, where quotations once again responded to all-round demand and the effects of stock shortages, gave the industrial sector a further early boost. The FT 30-share index was over five

points up fairly quickly and by noon was less than that amount away from its all-time peak attained in September, 1977.

Eleventh-hour nervousness set in regarding last night's no-confidence vote but had little impact on sentiment until the funds began to react. As the pace of the downturn here gathered pace, so profit-taking started to develop among leading equities although many secondary stocks remained at, or near, the best of the day.

Most first-line issues, including many industrial constituents, settled slightly lower on balance. Engineering leaders such as GKN and Tui Investments were especially dull but, in marked contrast, British Petroleum went from strength to strength to close 28 higher at a fresh peak of 144p. The index closed a net 0.9 lower at 533.3, representing

a turnaround of 8.1 index points from the noon calculation.

Within the first hour of business, long Glits were 11 points up but gradually reverted to overnight list levels before hardening again late in the day. A useful business ensued in a restricted market. Buildings, Firmer initially, leading issues subsequently encountered scattered offerings and final quotations were some way below the day's best. Fresh demand was forthcoming for Blue Circle which touched 342p before settling at the overnight level of 338p, while Redland progressed to 209p before a bout of scrapie selling left the price unchanged at 200p. Contracting and Construction generally closed with moderate gains, GCB added 7 to 240p and Taylor Woodrow 6 to 402p, but recently buoyant Brown and Jackson slipped 5 to 245p. Elsewhere, annual profits in line with market estimates lifted Maudslays 4 to 144p, while news also prompted firmness in Feb International, while the Ordinary and A both improving 4 to 38p and 37p respectively.

A penny easier initially on Press suggestions of a rights issue, ICI subsequently progressed to 466p before settling at 460p for a net gain of 3. Flomax attracted a good trade and finished 6 to the good at 327p, 333p. Dull of late on the annual profits setback, Yorkshire Chemical rallied 8 to 84p, while news also prompted firmness in the company left British Tar 11p firmer at 57p.

early afternoon. Business became heated and rates, which had earlier rallied to around 63p per cent, fell sharply and the premium closed a net 51 points down at 56p per cent. Yesterday's SE conversion factor was 0.8006 (0.7734).

## FT-Actuaries Indices

The input of a wrong price for Rio Tinto Zinc last Monday led to incorrect figures being shown for that day's Mining Finance and All-share indices. The corrected figures are in today's display.

Discouraged advance  
Reflecting the continuing buoyancy of the gilt-edged market, Discount Houses made further good progress. Allen Harvey and Ross jumped 25 to 385p and Union rose 15 to 380p, after 385p, while Alexander, 275p, and Smith St Aubrey, 102p, added 12 and 10 respectively. King and Shaxson improved 7 to 77p and Jessel Toyne put on 10 to 80p. Hire Purchase gained ground on hopes of an imminent fall in interest rates. Hambros added 7 to 250p among merchant banks. Foreign issues took a turn for the worse following a late collapse in the investment currency premium. ANZ ended 15 lower at 280p and Hong Kong and Shanghai dipped 6 to 161p, after 170p. Home banks drifted lower from a firm start to close with small losses.

Life issues claimed most of the attention in Insurance following favourable trading statements from Prudential and Legal and General, the former touched 189p before closing 9 up at 187p on the better-than-expected figures, while the latter added 4 dearer at 190p, after 197p, after the results and proposed reorganisation. Hambro Life jumped 17 to 490p in sympathy.

Breweries again saw an active trade with the leaders closing around the day's best. Bass were firm, adding 4 to 207p, while Guinness put on 3 to 187p. Among secondary issues, country buying in a restricted market lifted Marland 14 to 121p.

A useful business ensued in a restricted market. Buildings, Firmer initially, leading issues subsequently encountered scattered offerings and final quotations were some way below the day's best. Fresh demand was forthcoming for Blue Circle which touched 342p before settling at the overnight level of 338p, while Redland progressed to 209p before a bout of scrapie selling left the price unchanged at 200p. Contracting and Construction generally closed with moderate gains, GCB added 7 to 240p and Taylor Woodrow 6 to 402p, but recently buoyant Brown and Jackson slipped 5 to 245p. Elsewhere, annual profits in line with market estimates lifted Maudslays 4 to 144p, while news also prompted firmness in Feb International, while the Ordinary and A both improving 4 to 38p and 37p respectively.

A penny easier initially on Press suggestions of a rights issue, ICI subsequently progressed to 466p before settling at 460p for a net gain of 3. Flomax attracted a good trade and finished 6 to the good at 327p, 333p. Dull of late on the annual profits setback, Yorkshire Chemical rallied 8 to 84p, while news also prompted firmness in the company left British Tar 11p firmer at 57p.

early afternoon. Business became heated and rates, which had earlier rallied to around 63p per cent, fell sharply and the premium closed a net 51 points down at 56p per cent. Yesterday's SE conversion factor was 0.8006 (0.7734).

## Burton up again

buying on a combination of enfranchisement and bid hopes helped Burton issues feature a firm start. The Ordinary gained 12 to 323p, 329p. A Jessel Toyne put on 10 to 80p. Hire Purchase gained ground on hopes of an imminent fall in interest rates. Hambros added 7 to 250p among merchant banks. Foreign issues took a turn for the worse following a late collapse in the investment currency premium. ANZ ended 15 lower at 280p and Hong Kong and Shanghai dipped 6 to 161p, after 170p. Home banks drifted lower from a firm start to close with small losses.

Life issues claimed most of the attention in Insurance following favourable trading statements from Prudential and Legal and General, the former touched 189p before closing 9 up at 187p on the better-than-expected figures, while the latter added 4 dearer at 190p, after 197p, after the results and proposed reorganisation. Hambro Life jumped 17 to 490p in sympathy.

minated forthwith. Elsewhere in the Electrical sector, Farwell contrasted with a gain of 23 to 528p following demand in a restricted market. Other noteworthy movements included Electronic Rentals which pushed ahead to close 9 dearer at 225p and W&A Electric, up 10 to 252p, the latter in response to Press mention.

The Engineering leaders failed to participate in the early improvement, prices being dull throughout the session. Nervous selling ahead of next week's preliminary results left GKN 11p cheaper at 275p, while scattered offerings were reflected in respective falls of 8 and 6 in John Brown, 553p, and Tubes, 408p. Elsewhere, favourable Press mention prompted a gain of 6 to 266p in Bulbough. Satisfactory trading statements left Rotork 5 higher at 63p and R. Carrivort 2 better at 39p. Eva Industries were supported at 94p, but Alcan Aluminium came on after following the annual meeting and gave up 10 to 185p.

In Supermarkets, a relatively small market lifted Tesco 11p for a two-day gain of 4 to 71p. In this market, Millards advanced 7 to 282p. Carr's Milling attracted persistent speculative support and rose 13 to a three-day gain of 25 to 123p, but late selling left associated Fisheries 8 down at 36p. Still reflecting the poor interim results, Bluebird Confectionery shed 4 for a two-day fall of 16 to 79p.

In Hotels and Caterers, late selling left Ladbroke 8 cheaper at 216p. Speculative demand lifted Savoy 5 to 98p and M. F. North 2 to 40p.

Secondary issues provided the major features in the miscellaneous Industrial sector. Sharma Ware stood out with a rise of 18 to 145p in response to the better-than-expected results, while Stag Furniture also drew strength from good annual figures and closed 3 up at 195p. News of the Servis subsidiary helped Wilkins and Mitchell advance 6 to 44p, while buying ahead of forthcoming figures left Booker McConnell 3 better at 233p. North Sea oil orientated stocks attracted good support. I.C. Gas closed 20 higher at 460p, Cawoods 13 dearer at 195p and National Carbide 4 up at 50p. Demand ahead of the results on April 11 left Kalamazoo up 7 at 62p and a similar rise was seen in Stocklake at 83p. Late details of the acquisition of Roids Advertising had no effect on Exel, which held at the slightly firmer level of 152p. A dull market of late following major discrepancies at its Green-bat subsidiary, Fairbairn Lawson remained under a cloud at 37p.

comment and the expected interim profits rise, before settling for a net rise of 2 at 87p.

After remaining quiet for most of the day overseas registered mining issues fell away sharply in the wake of the South African Gold, in sterling terms, had previously edged higher, but the fall in the premium quickly saw prices marked down and the Gold Mines index registered a 2.5 loss at 156.8. The ex-premium index, however, improved 2.1 to 125.6. Until the premium fell away Golds had attracted a fair overseas and local demand in front of and following the South African budget with 10 proposed 172p.

## Oils strong again

The prospect of a 16 per cent rise in North Sea oil prices made for another show of strength in the Oil Sector. Trading conditions throughout the sector were extremely active and the final tone was fully firm. British Petroleum led the way with a further rise of 28 to 1144p, while Shell ended 11 to the good at 747p, after 750p. Trusts made a firm all-round showing with some particularly good gains recorded in Capital issues, New Throgmorton rising 16 to 506p and Derby Trust 8 to 176p. A high level of interest was again apparent in the Textile sector although notable gains were usually confined to those reporting trading statements. A. Bechman ran up to 80p on Press

## FINANCIAL TIMES STOCK INDICES

	March 28	March 27	March 26	March 25	March 24	March 23	March 22	March 21	March 20
Government Secs.	74.30	74.15	73.03	73.05	72.29	72.94	72.94	72.94	72.94
Fixed Interest	73.22	74.41	73.96	73.05	73.04	73.35	73.35	73.35	73.35
Industrial	838.3	839.2	830.8	834.6	834.6	834.6	834.6	834.6	834.6
Gold Mines	158.0	159.7	161.1	161.7	159.1	159.1	159.1	159.1	159.1
Gold Mines (ex-5pmt)	125.5	127.5	122.2	122.9	124.3	124.3	124.3	124.3	124.3
Ord. Div. Yield	5.30	5.30	5.40	5.50	5.55	5.55	5.55	5.55	5.55
Earnings, Yld % (full)	14.09	14.11	14.33	14.30	14.74	14.74	14.74	14.74	14.74
P/E Ratio (net)	9.04	9.08	8.90	8.97	8.85	8.74	8.74	8.74	8.74
Dealings marked	9,554	9,554	9,078	9,078	7,444	8,004	8,004	8,004	8,004
Equity turnover £m.	167.34	140.14	230.53	158.78	120.05	79.86	79.86	79.86	79.86
Equity bargains total	56,256	52,058	23,500	27,944	35,987	19,907	19,907	19,907	19,907

10 am 543.8, 11 am 544.2, Noon 544.4, 1 pm 541.7, 2 pm 540.2, 3 pm 538.5, 4 pm 537.1, 5 pm 535.3, 6 pm 533.5, 7 pm 531.7, 8 pm 529.9, 9 pm 528.1, 10 pm 526.3, 11 pm 524.5, 12 pm 522.7, 1 pm 520.9, 2 pm 519.1, 3 pm 517.3, 4 pm 515.5, 5 pm 513.7, 6 pm 511.9, 7 pm 510.1, 8 pm 508.3, 9 pm 506.5, 10 pm 504.7, 11 pm 502.9, 12 pm 501.1, 1 pm 499.3, 2 pm 497.5, 3 pm 495.7, 4 pm 493.9, 5 pm 492.1, 6 pm 490.3, 7 pm 488.5, 8 pm 486.7, 9 pm 484.9, 10 pm 483.1, 11 pm 481.3, 12 pm 479.5, 1 pm 477.7, 2 pm 475.9, 3 pm 474.1, 4 pm 472.3, 5 pm 470.5, 6 pm 468.7, 7 pm 466.9, 8 pm 465.1, 9 pm 463.3, 10 pm 461.5, 11 pm 459.7, 12 pm 457.9, 1 pm 456.1, 2 pm 454.3, 3 pm 452.5, 4 pm 450.7, 5 pm 448.9, 6 pm 447.1, 7 pm 445.3, 8 pm 443.5, 9 pm 441.7, 10 pm 439.9, 11 pm 438.1, 12 pm 436.3, 1 pm 434.5, 2 pm 432.7, 3 pm 430.9, 4 pm 429.1, 5 pm 427.3, 6 pm 425.5, 7 pm 423.7, 8 pm 421.9, 9 pm 420.1, 10 pm 418.3, 11 pm 416.5, 12 pm 414.7, 1 pm 412.9, 2 pm 411.1, 3 pm 409.3, 4 pm 407.5, 5 pm 405.7, 6 pm 403.9, 7 pm 402.1, 8 pm 400.3, 9 pm 398.5, 10 pm 396.7, 11 pm 394.9, 12 pm 393.1, 1 pm 391.3, 2 pm 389.5, 3 pm 387.7, 4 pm 385.9, 5 pm 384.1, 6 pm 382.3, 7 pm 380.5, 8 pm 378.7, 9 pm 376.9, 10 pm 375.1, 11 pm 373.3, 12 pm 371.5, 1 pm 369.7, 2 pm 367.9, 3 pm 366.1, 4 pm 364.3, 5 pm 362.5, 6 pm 360.7, 7 pm 358.9, 8 pm 357.1, 9 pm 355.3, 10 pm 353.5, 11 pm 351.7, 12 pm 349.9, 1 pm 348.1, 2 pm 346.3, 3 pm 344.5, 4 pm 342.7, 5 pm 340.9, 6 pm 339.1, 7 pm 337.3, 8 pm 335.5, 9 pm 333.7, 10 pm 331.9, 11 pm 330.1, 12 pm 328.3, 1 pm 326.5, 2 pm 324.7, 3 pm 322.9, 4 pm 321.1, 5 pm 319.3, 6 pm 317.5, 7 pm 315.7, 8 pm 313.9, 9 pm 312.1, 10 pm 310.3, 11 pm 308.5, 12 pm 306.7, 1 pm 304.9, 2 pm 303.1, 3 pm 301.3, 4 pm 299.5, 5 pm 297.7, 6 pm 295.9, 7 pm 294.1, 8 pm 292.3, 9 pm 290.5, 10 pm 288.7, 11 pm 286.9, 12 pm 285.1, 1 pm 283.3, 2 pm 281.5, 3 pm 279.7, 4 pm 277.9, 5 pm 276.1, 6 pm 274.3, 7 pm 272.5, 8 pm 270.7, 9 pm 268.9, 10 pm 267.1, 11 pm 265.3, 12 pm 263.5, 1 pm 261.7, 2 pm 259.9, 3 pm 258.1, 4 pm 256.3, 5 pm 254.5, 6 pm 252.7, 7 pm 250.9, 8 pm 249.1, 9 pm 247.3, 10 pm 245.5, 11 pm 243.7, 12 pm 241.9, 1 pm 240.1, 2 pm 238.3, 3 pm 236.5, 4 pm 234.7, 5 pm 232.9, 6 pm 231.1, 7 pm 229.3, 8 pm 227.5, 9 pm 225.7, 10 pm 223.9, 11 pm 222.1, 12 pm 220.3, 1 pm 218.5, 2 pm 216.7, 3 pm 214.9, 4 pm 213.1, 5 pm 211.3, 6 pm 209.5, 7 pm 207.7, 8 pm 205.9, 9 pm 204.1, 10 pm 202.3, 11 pm 200.5, 12 pm 198.7, 1 pm 196.9, 2 pm 195.1, 3 pm 193.3, 4 pm 191.5, 5 pm 189.7, 6 pm 187.9, 7 pm 186.1, 8 pm 184.3, 9 pm 182.5, 10 pm 180.7, 11 pm 178.9, 12 pm 177.1, 1 pm 175.3, 2 pm 173.5, 3 pm 171.7, 4 pm 169.9, 5 pm 168.1, 6 pm 166.3, 7 pm 164.5, 8 pm 162.7, 9 pm 160.9, 10 pm 159.1, 11 pm 157.3, 12 pm 155.5, 1 pm 153.7, 2 pm 151.9, 3 pm 150.1, 4 pm 148.3, 5 pm 146.5, 6 pm 144.7, 7 pm 142.9, 8 pm 141.1, 9 pm 139.3, 10 pm 137.5, 11 pm 135.7, 12 pm 133.9, 1 pm 132.1, 2 pm 130.3, 3 pm 128.5, 4 pm 126.7, 5 pm 124.9, 6 pm 123.1, 7 pm 121.3, 8 pm 119.5, 9 pm 117.7, 10 pm 115.9, 11 pm 114.1, 12 pm 112.3, 1 pm 110.5, 2 pm 108.7, 3 pm 106.9, 4 pm 105.1, 5 pm 103.3, 6 pm 101.5, 7 pm 99.7, 8 pm 97.9, 9 pm 96.1, 10 pm 94.3, 11 pm 92.5, 12 pm 90.7, 1 pm 88.9, 2 pm 87.1, 3 pm 85.3, 4 pm 83.5, 5 pm 81.7, 6 pm 79.9, 7 pm 78.1, 8 pm 76.3, 9 pm 74.5, 10 pm 72.7, 11 pm 70.9, 12 pm 69.1, 1 pm 67.3, 2 pm 65.5, 3 pm 63.7, 4 pm 61.9, 5 pm 60.1, 6 pm 58.3, 7 pm 56.5, 8 pm 54.7, 9 pm 52.9, 10 pm 51.1, 11 pm 49.3, 12 pm 47.5, 1 pm 45.7, 2 pm 43.9, 3 pm 42.1, 4 pm 40.3, 5 pm 38.5, 6 pm 36.7, 7 pm 34.9, 8 pm 33.1, 9 pm 31.3, 10 pm 29.5, 11 pm 27.7, 12 pm 25.9, 1 pm 24.1, 2 pm 22.3, 3 pm 20.5, 4 pm 18.7, 5 pm 16.9, 6 pm 15.1, 7 pm 13.3, 8 pm 11.5, 9 pm 9.7, 10 pm 7.9, 11 pm 6.1, 12 pm 4.3, 1 pm 2.5, 2 pm 0.7, 3 pm -1.1, 4 pm -2.9, 5 pm -4.7, 6 pm -6.5, 7 pm -8.3, 8 pm -10.1, 9 pm -11.9, 10 pm -13.7, 11 pm -15.5, 12 pm -17.3, 1 pm -19.1, 2 pm -20.9, 3 pm -22.7, 4 pm -24.5, 5 pm -26.3, 6 pm -28.1, 7 pm -29.9, 8 pm -31.7, 9 pm -33.5, 10 pm -35.3, 11 pm -37.1, 12 pm -38.9, 1 pm -40.7, 2 pm -42.5, 3 pm -44.3, 4 pm -46.1, 5 pm -47.9, 6 pm -49.7, 7 pm -51.5, 8 pm -53.3, 9 pm -55.1, 10 pm -56.9, 11 pm -58.7, 12 pm -60.5, 1 pm -62.3, 2 pm -64.1, 3 pm -65.9, 4 pm -67.7, 5 pm -69.5, 6 pm -71.3, 7 pm -73.1, 8 pm -74.9, 9 pm -76.7, 10 pm -78.5, 11 pm -80.3, 12 pm -82.1, 1 pm -83.9, 2 pm -85.7, 3 pm -87.5, 4 pm -89.3, 5 pm -91.1, 6 pm -92.9, 7 pm -94.7, 8 pm -96.5, 9 pm -98.3, 10 pm -100.1, 11 pm -101.9, 12 pm -103.7, 1 pm -105.5, 2 pm -107.3, 3 pm -109.1, 4 pm -110.9, 5 pm -112.7, 6 pm -114.5, 7 pm -116.3, 8 pm -118.1, 9 pm -119.9, 10 pm -121.7, 11 pm -123.5, 12 pm -125.3, 1 pm -127.1, 2 pm -128.9, 3 pm -130.7, 4 pm -132.5, 5 pm -134.3, 6 pm -136.1, 7 pm -137.9, 8 pm -139.7, 9 pm -141.5, 10 pm -143.3, 11 pm -145.1, 12 pm -146.9, 1 pm -148.7, 2 pm -150.5, 3 pm -152.3, 4 pm -154.1, 5 pm -155.9, 6 pm -157.7, 7 pm -159.5, 8 pm -161.3, 9 pm -163.1, 10 pm -164.9, 11 pm -166.7, 12 pm -168.5, 1 pm -170.3, 2 pm -172.1, 3 pm -173.9, 4 pm -175.7, 5 pm -177.5, 6 pm -179.3, 7 pm -181.1, 8 pm -182.9, 9 pm -184.7, 10 pm -186.5, 11 pm -188.3, 12 pm -190.1, 1 pm -191.9, 2 pm -193.7, 3 pm -195.5, 4 pm -197.3, 5 pm -199.1, 6 pm -200.9, 7 pm -202.7, 8 pm -204.5, 9 pm -206.3, 10 pm -208.1, 11 pm -209.9, 12 pm -211.7, 1 pm -213.5, 2 pm -215.3, 3 pm -217.1, 4 pm -218.9, 5 pm -220.7, 6 pm -222.5, 7 pm -224.3, 8 pm -226.1, 9 pm -227.9, 10 pm -229.7, 11 pm -231.5, 12 pm -233.3, 1 pm -235.1, 2 pm -236.9, 3 pm -238.7, 4 pm -240.5, 5 pm -242.3, 6 pm -244.1, 7 pm -245.9, 8 pm -247.7, 9 pm -249.5, 10 pm -251.3, 11 pm -253.1, 12 pm -254.9, 1 pm -256.7, 2 pm -258.5, 3 pm -260.3, 4 pm -262.1, 5 pm -263.9, 6 pm -265.7, 7 pm -267.5, 8 pm -269.3, 9 pm -271.1, 10 pm -272.9, 11 pm -274.7, 12 pm -276.5, 1 pm -278.3, 2 pm -280.1, 3 pm -281.9, 4 pm -283.7, 5 pm -285.5, 6 pm -287.3, 7 pm -289.1, 8 pm -290.9, 9 pm -292.7, 10 pm -294.5, 11 pm -296.3, 12 pm -298.1, 1 pm -300.0, 2 pm -301.8, 3 pm -303.6, 4 pm -305.4, 5 pm -307.2, 6 pm -309.0, 7 pm -310.8, 8 pm -312.6, 9 pm -314.4, 10 pm -316.2, 11 pm -318.0, 12 pm -319.8, 1 pm -321.6, 2 pm -323.4, 3 pm -325.2, 4 pm -327.0, 5 pm -328.8, 6 pm -330.6, 7 pm -332.4, 8 pm -334.2, 9 pm -336.0, 10 pm -337.8, 11 pm -339.6, 12 pm -341.4, 1 pm -343.2, 2 pm -345.0, 3 pm -346.8, 4 pm -348.6, 5 pm -350.4, 6 pm -352.2, 7 pm -354.0, 8 pm -355.8, 9 pm -357.6, 10 pm -359.4, 11 pm -361.2, 12 pm -363.0, 1 pm -364.8, 2 pm -366.6, 3 pm -368.4, 4 pm -370.2, 5 pm -372.0, 6 pm -373.8, 7 pm -375.6, 8 pm -377.4, 9 pm -379.2, 10 pm -381.0, 11 pm -382.8, 12 pm -384.6, 1 pm -386.4, 2 pm -388.2, 3 pm -390.0, 4 pm -391.8, 5 pm -393.6, 6 pm -395.4, 7 pm -397.2, 8 pm -399.0, 9 pm -400.8, 10 pm -402.6, 11 pm -404.4, 12 pm -406.2, 1 pm -408.0, 2 pm -409.8, 3 pm -411.6, 4 pm -413.4, 5 pm -415.2, 6 pm -417.0, 7 pm -418.8, 8 pm -420.6, 9 pm -422.4, 10 pm -424.2, 11 pm -426.0, 12 pm -427.8, 1 pm -429.6, 2 pm -431.4, 3 pm -433.2, 4 pm -435.0, 5 pm -436.8, 6 pm -438.6, 7 pm -440.4, 8 pm -442.2, 9 pm -444.0, 10 pm -445.8, 11 pm -447.6, 12 pm -449.4, 1 pm -451.2, 2 pm -453.0, 3 pm -454.8, 4 pm -456.6, 5 pm -458.4, 6 pm -460.2, 7 pm -462.0, 8 pm -463.8, 9 pm -465.6, 10 pm -467.4, 11 pm -469.2, 12 pm -471.0, 1 pm -472.8, 2 pm -474.6, 3 pm -476.4, 4 pm -478.2, 5 pm -480.0, 6 pm -481.8, 7 pm -483.6, 8 pm -485.4, 9 pm -487.2, 10 pm -489.0, 11 pm -490.8, 12 pm -492.6, 1 pm -494.4, 2 pm -496.2, 3 pm -498.0, 4 pm -500.0, 5 pm -501.8, 6 pm -503.6, 7 pm -505.4, 8 pm -507.2, 9 pm -509.0, 10 pm -510.8, 11 pm -512.6, 12 pm -514.4, 1 pm -516.2, 2 pm -518.0, 3 pm -519.8, 4 pm -521.6, 5 pm -523.4, 6 pm -525.2, 7 pm -527.0, 8 pm -528.8, 9 pm -530.6, 10 pm -532.4, 11 pm -534.2, 12 pm -536.0, 1 pm -537.8, 2 pm -539.6, 3 pm -541.4, 4 pm -543.2, 5 pm -545.0, 6 pm -546.8, 7 pm -548.6, 8 pm -550.4, 9 pm -552.2, 10 pm -554.0, 11 pm -555.8, 12 pm -557.6, 1 pm -559.4, 2 pm -561.2, 3 pm -563.0, 4 pm -564.8, 5 pm -566.6, 6 pm -568.4, 7 pm -570.2, 8 pm -572.0, 9 pm -573.8, 10 pm -575.6, 11 pm -577.4, 12 pm -579.2, 1 pm -581.0, 2 pm -582.8, 3 pm -584.6, 4 pm -586.4, 5 pm -588.2, 6 pm -590.0, 7 pm -591.8, 8 pm -593.6, 9 pm -595.4, 10 pm -597.2, 11 pm -599.0, 12 pm -600.8, 1 pm -602.6, 2 pm -604.4, 3 pm -606.2, 4 pm -608.0, 5 pm -609.8, 6 pm -611.6, 7 pm -613.4, 8 pm -615.2, 9 pm -617.0, 10 pm -618.8, 11 pm -620.6, 12 pm -622.4, 1 pm -624.2, 2 pm -626.0, 3 pm -627.8, 4 pm -629.6, 5 pm -631.4, 6 pm -633.2, 7 pm -635.0, 8 pm -636.8, 9 pm -638.6, 10 pm -640.4, 11 pm -642.2, 12 pm -644.0, 1 pm -645.8, 2 pm -647.6, 3 pm -649.4, 4 pm -651.2, 5 pm -653.0, 6 pm -654.8, 7 pm -656.6, 8 pm -658.4, 9 pm -660.2, 10 pm -662.0, 11 pm -663.8, 12 pm -665.6, 1 pm -667.4, 2 pm -669.2, 3 pm -671.0, 4 pm -672.8, 5 pm -674.6, 6 pm -676.4, 7 pm -678.2, 8 pm -680.0, 9 pm -681.8, 10 pm -683.6, 11 pm -685.4, 12 pm -687.2, 1 pm -689.0, 2 pm -690.8, 3 pm -692.6, 4 pm -694.4, 5 pm -696.2,



# AUTHORISED UNIT TRUSTS

[illegible]

## Minster Fund Managers Ltd.

[illegible]

## Provincial Life Inv.

[illegible]

**Co., Ltd.,** **Schlesing**

[illegible]

Trust Mngers. Ltd. (a) (x)

[illegible]

Target Tst. Mgrs. (Scotland) (a

[illegible]

## b) 05

[illegible]

## OFFSHORE AND OVERSEAS FUNDS

[illegible]

## NOTES

\* Prices do not include U.S. premium, except where indicated †, and are in pence unless otherwise indicated.  
Yields % (shown in last column) allow for all taxing expenses. ‡ Offered prices include all expenses.  
§ Today's price, c. Yield based on offer price, d. Estimated. e. Total. f. Opening price in London.  
g. UK taxes. h. Periodic premium insurance plans. i. Single premium insurance. j. Distribution  
expenses except agent's commission. k. Offered price includes all expenses if bought through market.  
l. Previous day's price. m. Net of tax on realized capital gains included, indicated by †. n. Guaranteed.  
o. Suspended. p. Yield before Jersey tax. q. Ex-subdivision. r. Only available to playables.







**FINANCE, LAND—Continued**

1978-79		High	Low	Stock	Price	±	Bk. Net	Cvt	1978-79
20%	13%	13%	13%	Lanet Hops 10p	20	-1	0.3	0.9	2.2
30%	36	36	36	Lon. Euro. Grp.	10	-	10.51	4.7	2.2
40%	36	36	36	Lon. Merchants	35	+2	+40.84	3.4	1.4
50%	36	36	36	Lon. Wines 10p	92	-1	0.5	1.4	1.4
60%	36	36	36	Majestic Inv. 10p	92	-1	+40.75	2.8	1.4
70%	36	36	36	Martin (R.P.) 5p	10	-	0.5	0.7	10.7
80%	36	36	36	Mellor 10p	10	-	0.5	0.7	10.7
90%	36	36	36	Moolay (C.) 10p	58	-	0.5	0.7	10.7
100%	36	36	36	M.N.C. Inv. 12p	192	-	1.43	1.6	10.9
110%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
120%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
130%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
140%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
150%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
160%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
170%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
180%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
190%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
200%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
210%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
220%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
230%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
240%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
250%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
260%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
270%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
280%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
290%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
300%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
310%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
320%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
330%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
340%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
350%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
360%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
370%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
380%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
390%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
400%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
410%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
420%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
430%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
440%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
450%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
460%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
470%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
480%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
490%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
500%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
510%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
520%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
530%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
540%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
550%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
560%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
570%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
580%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
590%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
600%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
610%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
620%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
630%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
640%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
650%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
660%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
670%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
680%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
690%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
700%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
710%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
720%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
730%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
740%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
750%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
760%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
770%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
780%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
790%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
800%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
810%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
820%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
830%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
840%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
850%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
860%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
870%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
880%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
890%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
900%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
910%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
920%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
930%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
940%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
950%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
960%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
970%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
980%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
990%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7
1000%	36	36	36	Nippon Ry. 10p	132	-	0.5	0.7	10.7

1978-79		High	Low	Stock	Price	±	Bk. Net	Cvt	1978-79
125	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
130	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
135	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
140	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
145	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
150	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
155	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
160	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
165	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
170	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
175	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
180	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
185	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
190	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
195	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
200	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
205	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
210	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
215	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
220	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
225	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
230	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
235	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
240	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
245	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
250	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
255	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
260	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
265	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
270	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
275	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
280	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
285	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
290	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
295	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
300	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
305	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
310	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
315	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
320	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
325	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
330	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
335	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
340	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
345	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
350	64	64	64	HyAm Energy 10p	85	+2	16.16	1.9	1.1
355	64	64	64	HyAm Energy 10p	85	+2	16.16		

16	Brown (A)	20	Luma	25	Indropan	30	15
17	Burton (A)	22	Luzs Inds.	27	MEPC	32	16
18	Cadbury	23	Luzs Bank	28	Peashey	33	17
19	Coverdale	24	Luzs Sme	29	Samuel Prop.	34	18
20	Debenhams	25	Mazand Bank	30	19		
21	Distillers	26	N.E.I.	31	20		
22	Edwards	27	N. Ind. Equip.	32	21		
23	Eagle Star	28	O. W. Warrants	33	22		
24	E.M.I.	29	P & O Inds	34	23		
25	Eng. Accident	30	P. H. Percy	35	24		
26	Ensign	31	P. H. Steel	36	25		
27	Essex Electric	32	P. H. Steel	37	26		
28	Giant	33	P. H. Steel	38	27		
29	Grand Met.	34	P. H. Steel	39	28		
30	G. & S. Inds.	35	P. H. Steel	40	29		
31	Guarantor	36	P. H. Steel	41	30		
32	G.W.N.	37	P. H. Steel	42	31		
33		38	P. H. Steel	43	32		
34		39	P. H. Steel	44	33		
35		40	P. H. Steel	45	34		
36		41	P. H. Steel	46	35		
37		42	P. H. Steel	47	36		
38		43	P. H. Steel	48	37		
39		44	P. H. Steel	49	38		
40		45	P. H. Steel	50	39		
41		46	P. H. Steel	51	40		
42		47	P. H. Steel	52	41		
43		48	P. H. Steel	53	42		
44		49	P. H. Steel	54	43		
45		50	P. H. Steel	55	44		
46		51	P. H. Steel	56	45		
47		52	P. H. Steel	57	46		
48		53	P. H. Steel	58	47		
49		54	P. H. Steel	59	48		
50		55	P. H. Steel	60	49		
51		56	P. H. Steel	61	50		
52		57	P. H. Steel	62	51		
53		58	P. H. Steel	63	52		
54		59	P. H. Steel	64	53		
55		60	P. H. Steel	65	54		
56		61	P. H. Steel	66	55		
57		62	P. H. Steel	67	56		
58		63	P. H. Steel	68	57		
59		64	P. H. Steel	69	58		
60		65	P. H. Steel	70	59		
61		66	P. H. Steel	71	60		
62		67	P. H. Steel	72	61		
63		68	P. H. Steel	73	62		
64		69	P. H. Steel	74	63		
65		70	P. H. Steel	75	64		
66		71	P. H. Steel	76	65		
67		72	P. H. Steel	77	66		
68		73	P. H. Steel	78	67		
69		74	P. H. Steel	79	68		
70		75	P. H. Steel	80	69		
71		76	P. H. Steel	81	70		
72		77	P. H. Steel	82	71		
73		78	P. H. Steel	83	72		
74		79	P. H. Steel	84	73		
75		80	P. H. Steel	85	74		
76		81	P. H. Steel	86	75		
77		82	P. H. Steel	87	76		
78		83	P. H. Steel	88	77		
79		84	P. H. Steel	89	78		
80		85	P. H. Steel	90	79		
81		86	P. H. Steel	91	80		
82		87	P. H. Steel	92	81		
83		88	P. H. Steel	93	82		
84		89	P. H. Steel	94	83		
85		90	P. H. Steel	95	84		
86		91	P. H. Steel	96	85		
87		92	P. H. Steel	97	86		
88		93	P. H. Steel	98	87		
89		94	P. H. Steel	99	88		
90		95	P. H. Steel	100	89		
91		96	P. H. Steel	101	90		
92		97	P. H. Steel	102	91		
93		98	P. H. Steel	103	92		
94		99	P. H. Steel	104	93		
95		100	P. H. Steel	105	94		
96		101	P. H. Steel	106	95		
97		102	P. H. Steel	107	96		
98		103	P. H. Steel	108	97		
99		104	P. H. Steel	109	98		
100		105	P. H. Steel	110	99		
101		106	P. H. Steel	111	100		
102		107	P. H. Steel	112	101		
103		108	P. H. Steel	113	102		
104		109	P. H. Steel	114	103		
105		110	P. H. Steel	115	104		
106		111	P. H. Steel	116	105		
107		112	P. H. Steel	117	106		
108		113	P. H. Steel	118	107		
109		114	P. H. Steel	119	108		
110		115	P. H. Steel	120	109		
111		116	P. H. Steel	121	110		
112		117	P. H. Steel	122	111		
113		118	P. H. Steel	123	112		
114		119	P. H. Steel	124	113		
115		120	P. H. Steel	125	114		
116		121	P. H. Steel	126	115		
117		122	P. H. Steel	127	116		
118		123	P. H. Steel	128	117		
119		124	P. H. Steel	129	118		
120		125	P. H. Steel	130	119		
121		126	P. H. Steel	131	120		
122		127	P. H. Steel	132	121		
123		128	P. H. Steel	133	122		
124		129	P. H. Steel	134	123		
125		130	P. H. Steel	135	124		
126		131	P. H. Steel	136	125		
127		132	P. H. Steel	137	126		
128		133	P. H. Steel	138	127		
129		134	P. H. Steel	139	128		
130		135	P. H. Steel	140	129		
131		136	P. H. Steel	141	130		
132		137	P. H. Steel	142	131		
133		138	P. H. Steel	143	132		
134		139	P. H. Steel	144	133		
135		140	P. H. Steel	145	134		
136		141	P. H. Steel	146	135		
137		142	P. H. Steel	147	136		
138		143	P. H. Steel	148	137		
139		144	P. H. Steel	149	138		
140		145	P. H. Steel	150	139		
141		146	P. H. Steel	151	140		
142		147	P. H. Steel	152	141		
143		148	P. H. Steel	153	142		
144		149	P. H. Steel	154	143		
145		150	P. H. Steel	155	144		
146		151	P. H. Steel	156	145		
147		152	P. H. Steel	157	146		
148		153	P. H. Steel	158	147		
149		154	P. H. Steel	159	148		
150		155	P. H. Steel	160	149		
151		156	P. H. Steel	161	150		
152		157	P. H. Steel	162	151		
153		158	P. H. Steel	163	152		
154		159	P. H. Steel	164	153		
155		160	P. H. Steel	165	154		
156		161	P. H. Steel	166	155		
157		162	P. H. Steel	167	156		
158		163	P. H. Steel	168	157		
159		164	P. H. Steel	169	158		
160		165	P. H. Steel	170	159		
161		166	P. H. Steel	171	160		
162		167	P. H. Steel	172	161		
163		168	P. H. Steel	173	162		
164		169	P. H. Steel	174	163		
165		170	P. H. Steel	175	164		
166		171	P. H. Steel	176	165		
167		172	P. H. Steel	177	166		
168		173	P. H. Steel	178	167		
169		174	P. H. Steel	179	168		
170		175	P. H. Steel	180	169		
171		176	P. H. Steel	181	170		
172		177	P. H. Steel	182	171		
173		178	P. H. Steel	183	172		
174		179	P. H. Steel	184	173		
175		180	P. H. Steel	185	174		
176		181	P. H. Steel	186	175		
177		182	P. H. Steel	187	176		
178		183	P. H. Steel	188	177		
179		184	P. H. Steel	189	178		
180		185	P. H. Steel	190	179		
181		186	P. H. Steel	191	180		
182		187	P. H. Steel	192	181		
183		188	P. H. Steel	193	182		
184		189	P. H. Steel	194	183		
185		190	P. H. Steel	195	184		
186		191	P. H. Steel	196	185		
187		192	P. H. Steel	197	186		
188		193	P. H. Steel	198	187		
189		194	P. H. Steel	199	188		
190		195	P. H. Steel	200	189		
191		196	P. H. Steel	201	190		
192		197	P. H. Steel	202	191		
193		198	P. H. Steel	203	192		
194		199	P. H. Steel	204	193		
195		200	P. H. Steel	205	194		
196		201	P. H. Steel	206	195		
197		202	P. H. Steel	207	196		
198		203	P. H. Steel	208	197		
199		204	P. H. Steel	209	198		
200		205	P. H. Steel	210	199		
201		206	P. H. Steel	211	200		
202		207	P. H. Steel	212	201		
203		208	P. H. Steel	213	202		
204		209	P. H. Steel	214	203		
205		210	P. H. Steel	215	204		
206		211	P. H. Steel	216	205		
207		212	P. H. Steel	217	206		
208		213	P. H. Steel	218	207		
209		214	P. H. Steel	219	208		
210		215	P. H. Steel	220	209		
211		216	P. H. Steel	221	210		
212		217	P. H. Steel	222	211		
213		218	P. H. Steel	223	212		
214		219	P. H. Steel	224	213		
215		220	P. H. Steel	225	214		
216		221	P. H. Steel	226	215		
217		222	P. H. Steel	227	216		
218		223	P. H. Steel	228	217		
219		224	P. H. Steel	229	218		
220		225	P. H. Steel	230	219		
221		226	P. H. Steel	231	220		
222		227	P. H. Steel	232	221		
223		228	P. H. Steel	233	222		
224		229	P. H. Steel	234	223		
225		230	P. H. Steel	235	224		
226		231	P. H. Steel	236	225		
227		232	P. H. Steel	237	226		
228		233	P. H. Steel	238	227		
229		234	P. H. Steel	239	228		
230		235	P. H. Steel	240	229		
231		236	P. H. Steel	241	230		
232		237	P. H. Steel	242	231		
233		238	P. H. Steel	243	232		
234		239	P. H. Steel	244	233		
235		240	P. H. Steel	245	234		
236		241	P. H. Steel	246	235		
237		242					

102	128	Imperial Mnt. 20c	196	-2	78 1/2	32	5
104	54	Lyonsburg 12c	91	+1	68 1/8	8 1/2	4
162	70	Rus. Plat. 10c	149	+3	68c	27	3

## CENTRAL AFRICAN

230	132	Falcon Rh. 50c	205	.....	1060c	17	21
24	11	Rhodesia Cons. 15c	21	.....	0.57	7 1/2	4
115	52	Roan Cons. K4	100	-7	.....	.....	.....
42	26	Wankie Col. Rh. 1	42	.....	99c	19	15
171	10	Zam. Cor. \$800.24	14 1/4	.....	.....	.....	.....

16	Brown (A)	20	Luma	25	Indropan	30	15
17	Burton (A)	22	Luzs Inds.	27	MEPC	32	16
18	Cadbury	23	Luzs Bank	28	Peashey	33	17
19	Coverdale	24	Luzs Sme	29	Samuel Prop.	34	18
20	Debenhams	25	Mazand Bank	30	19		
21	Distillers	26	N.E.I.	31	20		
22	Edwards	27	N. Ind. Equip.	32	21		
23	Eagle Star	28	O. W. Warrants	33	22		
24	E.M.I.	29	P & O Inds	34	23		
25	Eng. Accident	30	P. H. Percy	35	24		
26	Ensign	31	P. H. Steel	36	25		
27	Essex Electric	32	P. H. Steel	37	26		
28	Giant	33	P. H. Steel	38	27		
29	Grand Met.	34	P. H. Steel	39	28		
30	G. & S. Inds.	35	P. H. Steel	40	29		
31	Guarantor	36	P. H. Steel	41	30		
32	G.W.N.	37	P. H. Steel	42	31		
33		38	P. H. Steel	43	32		
34		39	P. H. Steel	44	33		
35		40	P. H. Steel	45	34		
36		41	P. H. Steel	46	35		
37		42	P. H. Steel	47	36		
38		43	P. H. Steel	48	37		
39		44	P. H. Steel	49	38		
40		45	P. H. Steel	50	39		
41		46	P. H. Steel	51	40		
42		47	P. H. Steel	52	41		
43		48	P. H. Steel	53	42		
44		49	P. H. Steel	54	43		
45		50	P. H. Steel	55	44		
46		51	P. H. Steel	56	45		
47		52	P. H. Steel	57	46		
48		53	P. H. Steel	58	47		
49		54	P. H. Steel	59	48		
50		55	P. H. Steel	60	49		
51		56	P. H. Steel	61	50		
52		57	P. H. Steel	62	51		
53		58	P. H. Steel	63	52		
54		59	P. H. Steel	64	53		
55		60	P. H. Steel	65	54		
56		61	P. H. Steel	66	55		
57		62	P. H. Steel	67	56		
58		63	P. H. Steel	68	57		
59		64	P. H. Steel	69	58		
60		65	P. H. Steel	70	59		
61		66	P. H. Steel	71	60		
62		67	P. H. Steel	72	61		
63		68	P. H. Steel	73	62		
64		69	P. H. Steel	74	63		
65		70	P. H. Steel	75	64		
66		71	P. H. Steel	76	65		
67		72	P. H. Steel	77	66		
68		73	P. H. Steel	78	67		
69		74	P. H. Steel	79	68		
70		75	P. H. Steel	80	69		
71		76	P. H. Steel	81	70		
72		77	P. H. Steel	82	71		
73		78	P. H. Steel	83	72		
74		79	P. H. Steel	84	73		
75		80	P. H. Steel	85	74		
76		81	P. H. Steel	86	75		
77		82	P. H. Steel	87	76		
78		83	P. H. Steel	88	77		
79		84	P. H. Steel	89	78		
80		85	P. H. Steel	90	79		
81		86	P. H. Steel	91	80		
82		87	P. H. Steel	92	81		
83		88	P. H. Steel	93	82		
84		89	P. H. Steel	94	83		
85		90	P. H. Steel	95	84		
86		91	P. H. Steel	96	85		
87		92	P. H. Steel	97	86		
88		93	P. H. Steel	98	87		
89		94	P. H. Steel	99	88		
90		95	P. H. Steel	100	89		
91		96	P. H. Steel	101	90		
92		97	P. H. Steel	102	91		
93		98	P. H. Steel	103	92		
94		99	P. H. Steel	104	93		
95		100	P. H. Steel	105	94		
96		101	P. H. Steel	106	95		
97		102	P. H. Steel	107	96		
98		103	P. H. Steel	108	97		
99		104	P. H. Steel	109	98		
100		105	P. H. Steel	110	99		
101		106	P. H. Steel	111	100		
102		107	P. H. Steel	112	101		
103		108	P. H. Steel	113	102		
104		109	P. H. Steel	114	103		
105		110	P. H. Steel	115	104		
106		111	P. H. Steel	116	105		
107		112	P. H. Steel	117	106		
108		113	P. H. Steel	118	107		
109		114	P. H. Steel	119	108		
110		115	P. H. Steel	120	109		
111		116	P. H. Steel	121	110		
112		117	P. H. Steel	122	111		
113		118	P. H. Steel	123	112		
114		119	P. H. Steel	124	113		
115		120	P. H. Steel	125	114		
116		121	P. H. Steel	126	115		
117		122	P. H. Steel	127	116		
118		123	P. H. Steel	128	117		
119		124	P. H. Steel	129	118		
120		125	P. H. Steel	130	119		
121		126	P. H. Steel	131	120		
122		127	P. H. Steel	132	121		
123		128	P. H. Steel	133	122		
124		129	P. H. Steel	134	123		
125		130	P. H. Steel	135	124		
126		131	P. H. Steel	136	125		
127		132	P. H. Steel	137	126		
128		133	P. H. Steel	138	127		
129		134	P. H. Steel	139	128		
130		135	P. H. Steel	140	129		
131		136	P. H. Steel	141	130		
132		137	P. H. Steel	142	131		
133		138	P. H. Steel	143	132		
134		139	P. H. Steel	144	133		
135		140	P. H. Steel	145	134		
136		141	P. H. Steel	146	135		
137		142	P. H. Steel	147	136		
138		143	P. H. Steel	148	137		
139		144	P. H. Steel	149	138		
140		145	P. H. Steel	150	139		
141		146	P. H. Steel	151	140		
142		147	P. H. Steel	152	141		
143		148	P. H. Steel	153	142		
144		149	P. H. Steel	154	143		
145		150	P. H. Steel	155	144		
146		151	P. H. Steel	156	145		
147		152	P. H. Steel	157	146		
148		153	P. H. Steel	158	147		
149		154	P. H. Steel	159	148		
150		155	P. H. Steel	160	149		
151		156	P. H. Steel	161	150		
152		157	P. H. Steel	162	151		
153		158	P. H. Steel	163	152		
154		159	P. H. Steel	164	153		
155		160	P. H. Steel	165	154		
156		161	P. H. Steel	166	155		
157		162	P. H. Steel	167	156		
158		163	P. H. Steel	168	157		
159		164	P. H. Steel	169	158		
160		165	P. H. Steel	170	159		
161		166	P. H. Steel	171	160		
162		167	P. H. Steel	172	161		
163		168	P. H. Steel	173	162		
164		169	P. H. Steel	174	163		
165		170	P. H. Steel	175	164		
166		171	P. H. Steel	176	165		
167		172	P. H. Steel	177	166		
168		173	P. H. Steel	178	167		
169		174	P. H. Steel	179	168		
170		175	P. H. Steel	180	169		
171		176	P. H. Steel	181	170		
172		177	P. H. Steel	182	171		
173		178	P. H. Steel	183	172		
174		179	P. H. Steel	184	173		
175		180	P. H. Steel	185	174		
176		181	P. H. Steel	186	175		
177		182	P. H. Steel	187	176		
178		183	P. H. Steel	188	177		
179		184	P. H. Steel	189	178		
180		185	P. H. Steel	190	179		
181		186	P. H. Steel	191	180		
182		187	P. H. Steel	192	181		
183		188	P. H. Steel	193	182		
184		189	P. H. Steel	194	183		
185		190	P. H. Steel	195	184		
186		191	P. H. Steel	196	185		
187		192	P. H. Steel	197	186		
188		193	P. H. Steel	198	187		
189		194	P. H. Steel	199	188		
190		195	P. H. Steel	200	189		
191		196	P. H. Steel	201	190		
192		197	P. H. Steel	202	191		
193		198	P. H. Steel	203	192		
194		199	P. H. Steel	204	193		
195		200	P. H. Steel	205	194		
196		201	P. H. Steel	206	195		
197		202	P. H. Steel	207	196		
198		203	P. H. Steel	208	197		
199		204	P. H. Steel	209	198		
200		205	P. H. Steel	210	199		
201		206	P. H. Steel	211	200		
202		207	P. H. Steel	212	201		
203		208	P. H. Steel	213	202		
204		209	P. H. Steel	214	203		
205		210	P. H. Steel	215	204		
206		211	P. H. Steel	216	205		
207		212	P. H. Steel	217	206		
208		213	P. H. Steel	218	207		
209		214	P. H. Steel	219	208		
210		215	P. H. Steel	220	209		
211		216	P. H. Steel	221	210		
212		217	P. H. Steel	222	211		
213		218	P. H. Steel	223	212		
214		219	P. H. Steel	224	213		
215		220	P. H. Steel	225	214		
216		221	P. H. Steel	226	215		
217		222	P. H. Steel	227	216		
218		223	P. H. Steel	228	217		
219		224	P. H. Steel	229	218		
220		225	P. H. Steel	230	219		
221		226	P. H. Steel	231	220		
222		227	P. H. Steel	232	221		
223		228	P. H. Steel	233	222		
224		229	P. H. Steel	234	223		
225		230	P. H. Steel	235	224		
226		231	P. H. Steel	236	225		
227		232	P. H. Steel	237	226		
228		233	P. H. Steel	238	227		
229		234	P. H. Steel	239	228		
230		235	P. H. Steel	240	229		
231		236	P. H. Steel	241	230		
232		237	P. H. Steel	242	231		
233		238	P. H. Steel	243	232		
234		239	P. H. Steel	244	233		
235		240	P. H. Steel	245	234		
236		241	P. H. Steel	246	235		
237		242					



# Politics and the fundamentals

He has not yet appointed a chairman for the inquiry, although a name strongly canvassed within the department is that of Professor Christopher Foster, whose report in January on the road haulage operators' licensing system was generally well received.

One of his recommendations was that the Government conduct a detailed inquiry into the environmental consequences of past and possible future growth in road freight.

**Rodgers rules out rail cuts,**  
Page 6

Registered at the Post Office, Printed  
by the Financial Times Ltd, Bracken H

Inverness	R	3	41	Vainola	R	15	64
I.o.Man	C	7	45	Venice	C	13	54
Jersey	F	7	45	Vinona	S	15	54
Jo'burg	S	26	78	Warsaw	C	5	47
La Plms.	C	19	48	Zurich	R	4	39
Lisbon	C	14	57				

C-Cloudy. F-Fair. Fq-Fog. R-Rain.  
S-Sunny. St-Storm. W-Wind.

Gross Income \_\_\_\_\_

Available Capital \_\_\_\_\_ FT29/3

[illegible]